# IV. Financial Sector

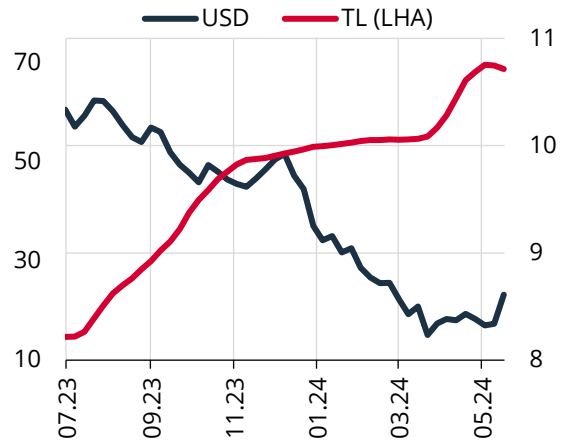
## IV.1 Credit Developments and Credit Risk

### IV.1.1 Credit Developments

**In addition to the policy rate hike, macroprudential measures for credit growth led to an increase in Turkish lira loan rates and further tightening in financial conditions.**

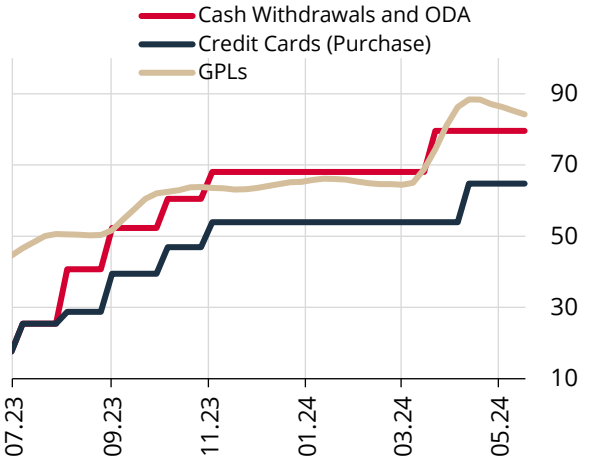
Macroprudential measures to support the monetary policy stance and the monetary transmission mechanism led to a notable increase in credit costs. In addition to policy rate hikes, the introduction of the rule on loan growth-based reserve requirement maintenance drove the rise in TL commercial loan rates (Chart IV.1.1). Moreover, the maximum interest rate applicable to credit card cash advances and overdraft accounts was raised to 5% per month in March 2024 and the maximum interest rate applicable to credit card shopping transactions was elevated to 4.25% in April 2024 (Chart IV.1.2). On the other hand, improved expectations for the depreciation of the Turkish lira, reduced exchange rate volatility and the widening of the expected cost gap between TL and FX commercial loan costs pushed the FX loan demand upwards. Banks' FX liquidity increased amid the decelerating TL loan growth and the reduced need for swaps as depositors started to switch from FX deposits to TL deposits, which had a downward impact on FX loan rates.

**Chart IV.1.1: Commercial Loan Rates** (Flow, 4 WMA, %)




Source: CBRT Last Observation: 17.05.2024

**Chart IV.1.2: General-purpose Loan and PCC Interest Rates** (Flow, 4 WMA, %)




Source: CBRT Last Observation: 17.05.2024

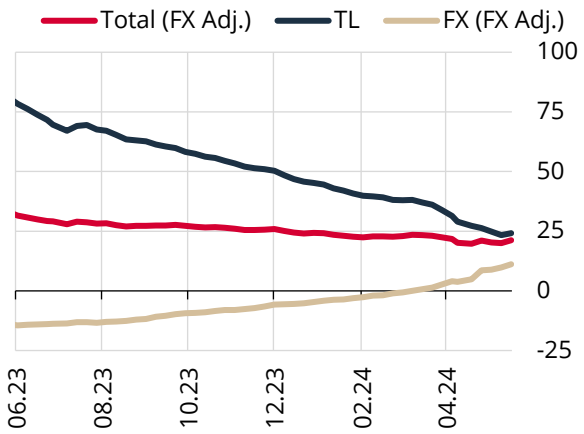
Note: TL investment and export loan rates exclude zero-interest loans, and are calculated excluding Türk Eximbank. TL and USD commercial loan rates exclude corporate credit cards, legal entity overdraft accounts and zero-interest loans, and are calculated including Türk Eximbank. To reflect the cost of the loan other than interest (excluding banking and insurance transactions taxes and resource utilization support fund taxes), the costs of all items including all kinds of fees, expenses and commissions other than interest (including fees and commissions that are not reflected as income to the bank such as appraisement, mortgage and insurance services) are also taken into account in retail loan rates. Real person overdraft account interest is excluded from general purpose loan interest.

**Turkish lira commercial loan growth, which gained momentum in the first quarter of 2024, has slowed down in the wake of the policy rate hike and macroprudential measures.**

Having followed a steady growth course until February, commercial loans witnessed higher-than-expected demand as of the second half of that month, which accelerated commercial loan growth in a short period of time. To balance this demand, which was also driven by expectations, in addition to the policy rate hike in March, loan growth limits were lowered to 2% and a reserve requirement rule was imposed on the amount exceeding the growth limit. Following these steps, TL commercial loan growth decelerated, while FX loan growth accelerated. In the current reporting period, rising TL commercial loan rates and the improvement in exchange rate expectations prompted the FX commercial loan demand. A monthly growth limit of 2%

was introduced to FX loans in May and it was decided to block TL-denominated required reserves for one year for the amount of loans exceeding the limit (Charts IV.1.3 and IV.1.4).

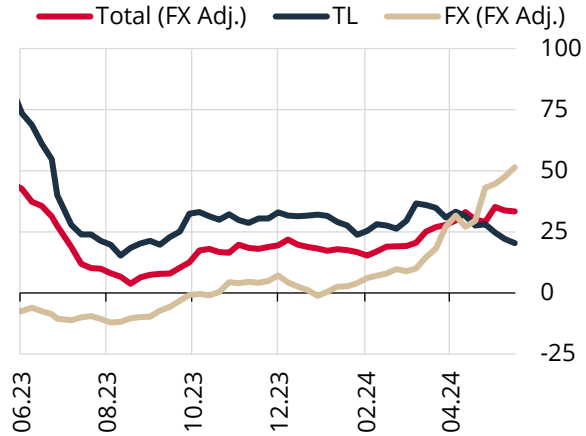
**Chart IV.1.3: Annual Growth of Commercial Loans** (%)




Source: CBRT Last Observation: 17.05.2024

Note: FX-indexed loans are included in FX loans. FX-adjusted loan growth is the ratio of the sum of the yearly change in TL loans and TL equivalent of change in FX loans, measured by multiplying one-year FX (basket) loan change with the one-year average basket exchange rate, by the total credit balance a year ago.

**Chart IV.1.4: 13-Week Growth of Commercial Loans** (Annualized, %)

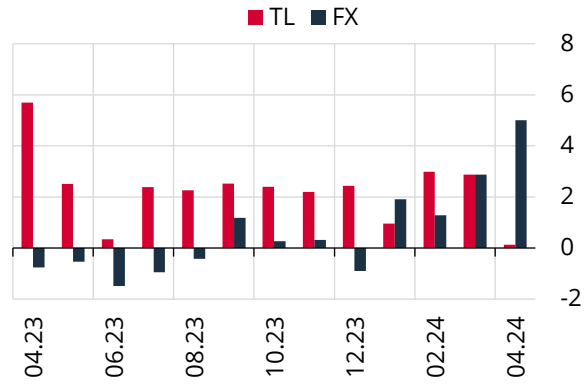



Source: CBRT Last Observation: 17.05.2024

Note: FX-indexed loans are included in FX loans. FX adjusted loan growth is the annualized ratio of the sum of the 13-week change in TL loans and TL equivalent of change in FX loans, measured by multiplying 13-week FX (basket) loan change with the 13-week average basket exchange rate, by the total credit balance 13 weeks ago.

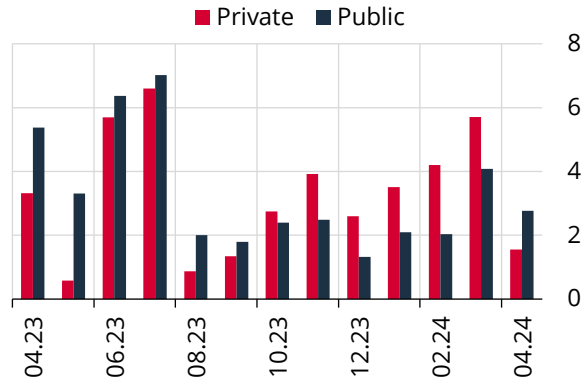
In addition to the slowdown in loan growth indicators, the composition of loan types has also been re-balanced (Charts IV.1.5 and IV.1.6). An analysis of monthly commercial loan growth rates reveals that after the acceleration in the TL commercial loan trend in February and March, a significant slowdown was seen in April due to the tight monetary policy stance and amended macroprudential regulations. The weight of FX loans in the loan composition has been going up since early 2024. The weight of private banks has recently increased in total commercial loan growth, which was largely driven by state-owned banks in past years.

**Chart IV.1.5: Monthly Commercial Loan Growth** (FX-Adjusted, %)




Source: CBRT Last Observation: 04.24

**Chart IV.1.6: Monthly Commercial Loan Growth** (FX-Adjusted, %)



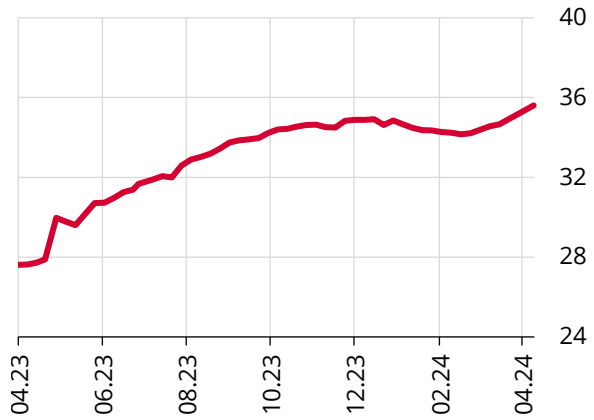

Source: CBRT Last Observation: 04.24

Note: FX-indexed loans are included in FX loans. FX commercial loan growth is calculated as the ratio of the sum of the TL equivalent of the change in TL loans and FX (basket) loan change within one month multiplied by the currency basket average within one month to the total loan balance one month ago.

**The share of export, investment, tradesmen and earthquake zone loans not subject to growth restrictions in commercial loan disbursements remains on the rise.**

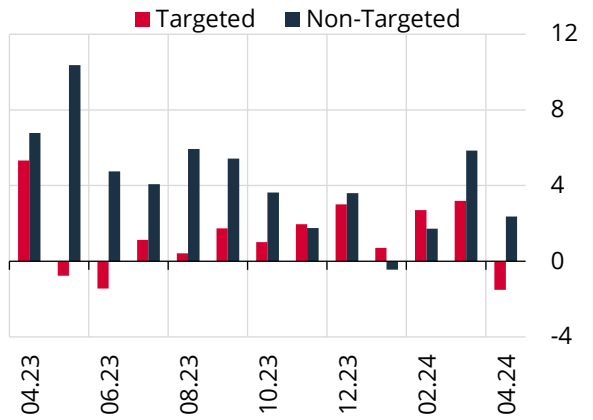
As of April 2024, the share of commercial loans not subject to growth restrictions (including TL-denominated investment, export, agricultural, tradesmen loans as well as loans extended to public institutions and to earthquake-stricken zones) in total TL commercial loans reached 35% (Chart IV.1.7). On the other hand, following the reserve requirement regulation for restricted loans in March, there was a significant increase in unrestricted TL commercial loans in terms of monthly growth (Chart IV.1.8).

**Chart IV.1.7: Share of TL Commercial Loans Not Subject to Growth Restrictions** (%)




Source: CBRT Last Observation: 26.04.2024

**Chart IV.1.8: Monthly Growth of TL Commercial Loans Subject to and Not Subject to Growth Restrictions** (%)




Source: CBRT Last Observation: 26.04.2024

Note: Commercial loans subject to growth restriction are calculated by subtracting investment, export, agricultural and tradesmen loans, loans extended to public institutions and organizations and exempted commercial loans in the scope of earthquake zone from TL commercial loans.

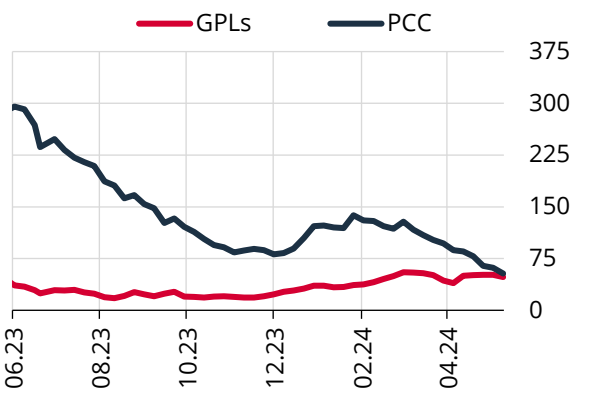
**Retail loan growth, which accelerated in the first quarter of 2024 due to credit card and general-purpose loans amid elevated uncertainty, lost pace following the measures put into effect.**

Due to the macroprudential measures introduced for retail loans and the tightening in financial conditions, retail loan growth weakened in April and fell to the average growth rate of the last quarter of 2023 (Chart IV.1.9). Given the current trend indicators, 13-week growth rates point to an annualized growth rate of 53% in the PCC segment and 48% in general purpose loans (Chart IV.1.10).

**Chart IV.1.9: 13-Week Growth of Retail Loans** (Annualized, %)


Source: CBRT Last Observation: 17.05.2024

**Chart IV.1.10: 13-Week Growth of PCC and General-Purpose Loans** (Annualized, %)



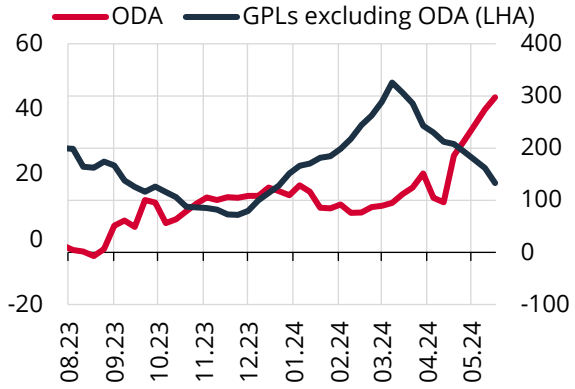

Source: CBRT Last Observation: 17.05.2024

**General-purpose loans grew on the back of ODA (overdraft) loans, while cash advance utilization pushed the PCC growth upwards. Following the raised maximum interest rates on credit cards and ODA, growth of these loans registered a slowdown.**

In the first quarter of 2024, the heightened perception of uncertainty led domestic demand to remain robust and boosted loan demand for consumption purposes. While the annualized 13-week growth rate of general-purpose loans (excluding ODA) approached 50% in March, the growth rate of general-purpose loans excluding ODA tumbled after the lowering of the growth limit and the introduction of the reserve requirement liability (Charts IV.1.11 and IV.1.12). On the other hand, growth in ODA that is not subject to the growth restrictions gained momentum. PCC borrowing exhibited a similar pattern. PCC growth followed a robust course until March due to factors such as the pulled-forward consumption demand amid higher prices of goods and services as well as the expected limitations on installments (Charts IV.1.13 and IV.1.14). Subsequently, interest rates on purchases with credit cards and cash advances were raised to levels in line with other types of retail loans, leading to a rebalancing in the growth of the PCC.

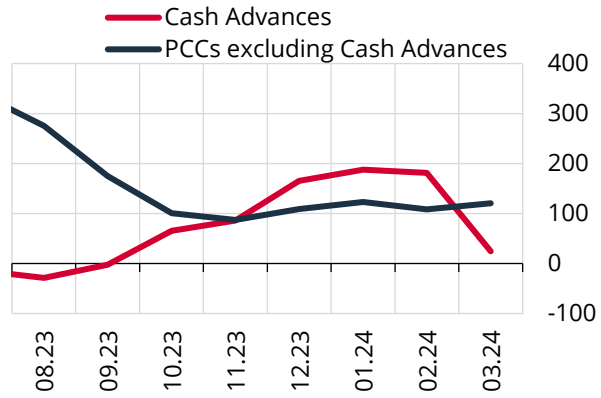
A breakdown of the PCC utilization reveals that the rebalancing on the PCC side is driven by payment in installments. On the other hand, it is obvious that the use of non-installment-based PCC is mostly for payment and transaction purposes. Along with the normalized consumption demand, improved expectations and the revisions introduced to the regulation, the retail loan demand is expected to lose further pace in the upcoming period.

**Chart IV.1.11: 13-Week Growth of ODA and General-Purpose Loans** (Annualized, %)



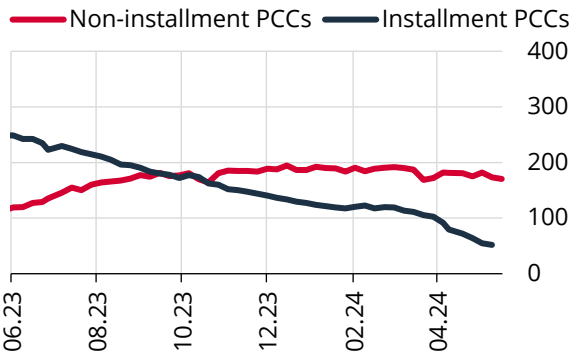

Source: CBRT Last Observation: 17.05.2024

**Chart IV.1.12: 13-Week Growth of Personal Credit Card and Cash Advances** (Annualized, %)



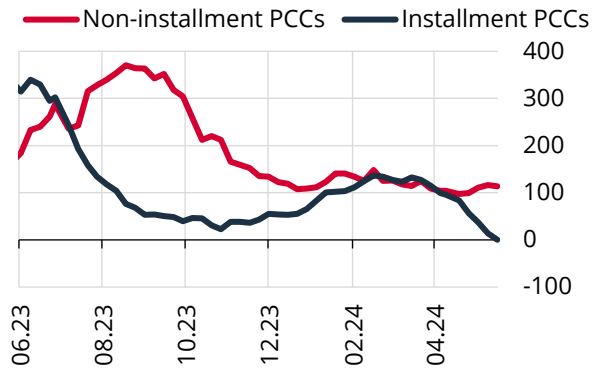

Source: CBRT Last Observation: 03.24

**Chart IV.1.13: Annual PCC Growth** (%)




Source: CBRT Last Observation: 17.05.2024

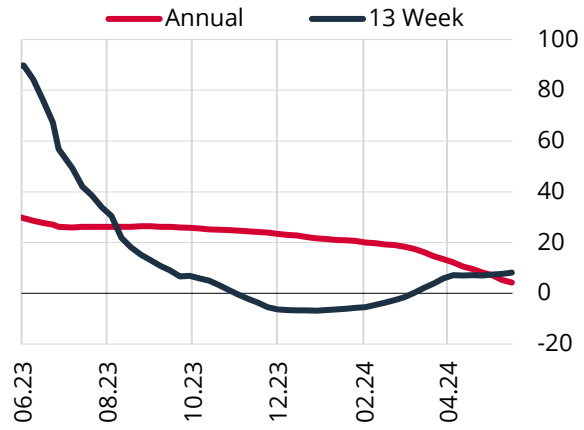
**Chart IV.1.14: 13-week PCC Growth** (Annualized, %)




Source: CBRT Last Observation: 17.05.2024

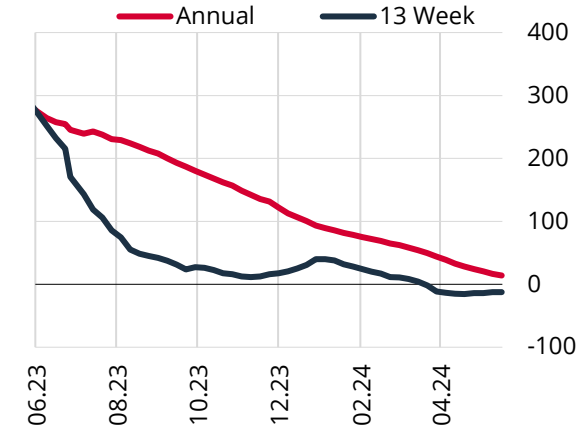
Due to factors such as rising interest rates, the elevated course of house prices, the mismatch between loan installment amounts and household income accompanied by the weak credit appetite of state-owned banks, the 13-week annualized housing loan growth rate fell into negative territory (Chart IV.1.15). The growth trend of vehicle loans, which was buoyant in the first half of 2023, lost considerable momentum amid growth constraints as well as the high course of vehicle prices (Chart IV.1.16).

**Chart IV.1.15: Housing Loan Growth** (%)




Source: CBRT Last Observation: 17.05.2024

**Chart IV.1.16: Vehicle Loan Growth** (%)



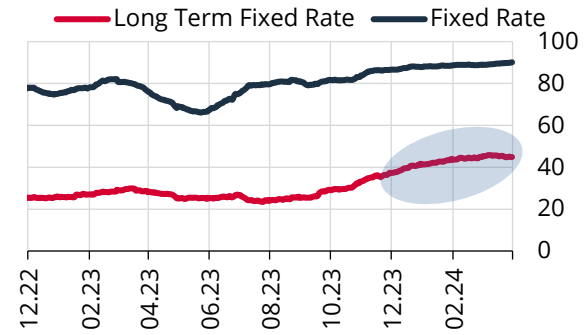

Source: CBRT Last Observation: 17.05.2024

Note: Annual series indicate 12-month loan growth, while 13-week series show annualized 13-week growth.

**In tandem with monetary tightening, banks' tendency to extend long-term and fixed-rate loans is high.**

The share of fixed-rate loans in total TL commercial loans, which fell to 66% in May 2023, rose to 90% in March 2024 (Chart IV.1.17). Moreover, the average maturity of fixed-rate TL commercial loans started to rise again in the second half of 2023. The average maturity of fixed-rate loans, which had receded below 290 days, approached 440 days in March 2024 (Chart IV.1.18). Banks' net interest margins reached positive territory, which is considered to improve longer-term borrowing opportunities. Moreover, banks' appetite for long-term loan supply is considered to be strong given the potential of high loan rates to generate long-term interest income and improved expectations.

**Chart IV.1.17: TL Commercial Loan Shares by Interest Rate and Maturity** (Flow, 60 DMA, %)




Source: CBRT Last Observation: 31.03.2024

Note: Long-term denotes loan disbursements over 365-day maturity. Shares of fixed-rate disbursements within total disbursements as well as long-term fixed-rate disbursements within the total are indicated.

**Chart IV.1.18: TL Fixed-Rate Commercial Loans Average Maturity by Interest Rate** (Flow, 60 DMA, Days, Original Maturity)


Source: CBRT Last Observation: 31.03.2024

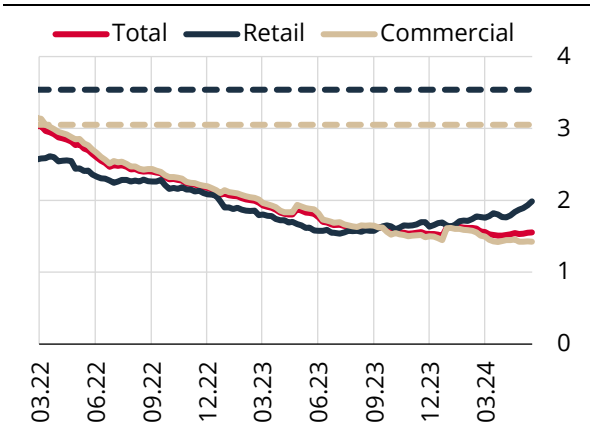
Note: Calculation excludes disbursements with zero maturity, zero-interest and non-reported interest rate structure. Dashed line shows the average of the series in the relevant color for the May 2019- March 2024 period.

## IV.1.2 Credit Risk

**Following the tightening of financial conditions, the retail loan NPL ratio deteriorated slightly.**

Despite the increase in the retail NPL ratio, the banking sector's total NPL ratio remained flat at 1.4% due to a decline in the corporate NPL ratio. Moreover, NPL ratios maintained their low levels below the historical average across all credit segments (Chart IV.1.17). An analysis of the factors contributing to the change in the total NPL ratio reveals that in the last quarter of 2023, the downward impact of loan growth and appreciation of the exchange rate on NPL ratio weakened, while the upward impact of NPL additions increased significantly. Despite the downward impact of the accelerated loan growth in the first quarter of 2024 on the NPL ratio, tighter financial conditions are expected to slow down loan growth and increase NPL additions in the upcoming period (Chart IV.1.18).

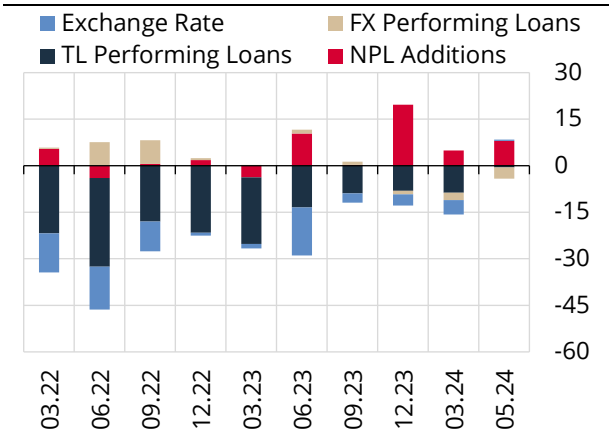
**Chart IV.1.17: NPL Ratios** (%)




Source: CBRT Last Observation: 17.05.2024

Note: Dashed lines indicate the average of the relevant series for the 2012-2019 period.

**Chart IV.1.18: Contributions to the Change in NPL Ratios** (3-Month Total Contributions, bps)



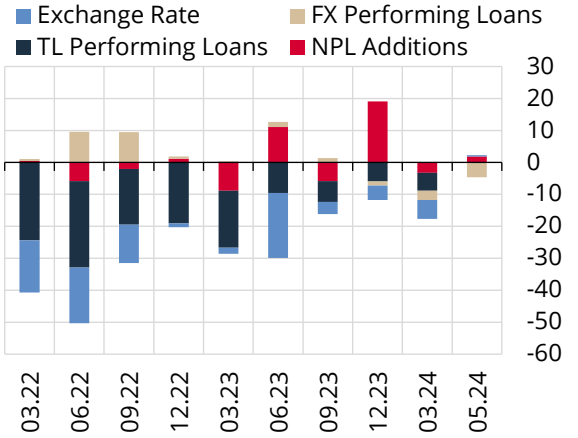

Source: CBRT Last Observation: 17.05.2024

Note: Contributions show the total contribution amount in the relevant three months, and the last column includes the contribution total from 1 April to 17 May. For technical details on the methodology, see Financial Stability Report of November 2018, Box IV.1.I.

An analysis of the factors contributing to the change in corporate and retail NPL ratios reveals that in the first quarter of 2024, the change in the corporate NPL ratio was positively affected by performing loans and exchange rate effects as well as the decline in NPL additions (Chart IV.1.19). Meanwhile, the change in the retail NPL ratio was caused by the upward effect of NPL additions, which exceeded the denominator effect driven by loan growth (Chart IV.1.20). The effects of financial tightening on the retail loan asset quality outlook started to become more evident in the first five months of 2024.

The decline in the corporate NPL ratio was mainly due to SMEs. NPL ratios of SMEs and non-SME firms remained significantly below the average of the previous periods at 1.6% and 1.3%, respectively. Despite the tightening in financial conditions, the buoyant economic activity and firms' strong liquidity positions had a favorable impact on the NPL outlook of SMEs and other firms.

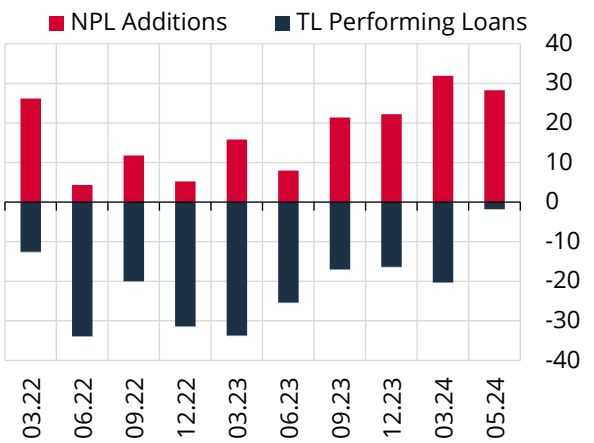
**Chart IV.1.19: Contributions to the Change in Corporate NPL Ratios** (3-Month Total Contributions, bps)




Source: CBRT Last Observation: 17.05.2024

Note: Contributions show the total contribution amount in the relevant three months, and the last column includes the contribution total from 1 April to 17 May. For technical details on the methodology, see Financial Stability Report of November 2018, Box IV.1.I.

**Chart IV.1.20: Contributions to the Change in Retail NPL Ratios** (3-Month Total Contributions, bps)

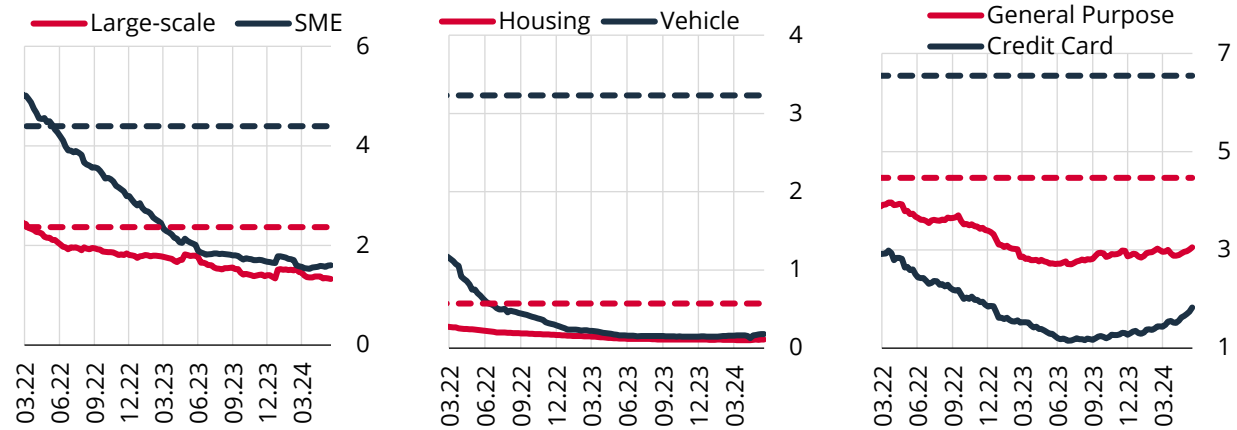



Source: CBRT Last Observation: 17.05.2024

Note: Contributions show the total contribution amount in the relevant three months, and the last column includes the contribution total from 1 April to 17 May. For technical details on the methodology, see Financial Stability Report of November 2018, Box IV.1.I.

Retail loan NPL ratios also remained below the average of the previous periods. Having rather low NPL ratios due to their collateralized structures and regulations limiting credit risk such as loan-to-value ratios, NPL ratios of housing and vehicle loans remained below the historical average at 0.1% and 0.2%, respectively. The NPL ratio of general-purpose loans remained flat at 3% in the current Report period. Given their short-term nature, personal credit card debt is directly affected by rising rates during a tightening process. The maximum interest rate limits for credit card cash withdrawals and transactions were raised in March and April, respectively. The NPL ratio of personal credit cards edged up to 1.8% due to the increase in interest rates yet remained below the long-term average.

**Chart IV.1.21: NPL Ratios in the Breakdown of Credit Types** (%)



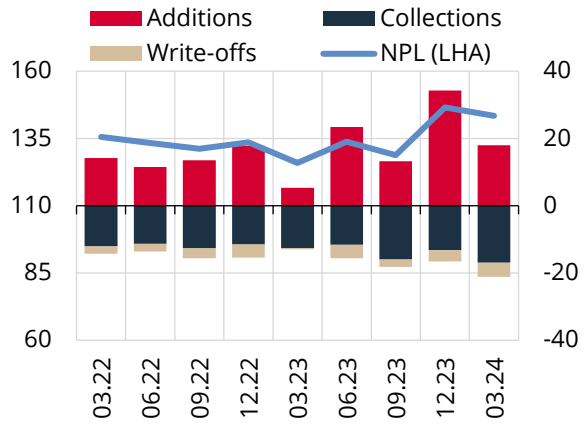

Source: CBRT Last Observation: 17.05.2024

Note: Dashed lines indicate the average of the relevant series for the 2012-2019 period.

**The ratio of NPL collections to additions eased, hovering above the long-term average in commercial loans and below the long-term average in retail loans.**

Owing to the strengthened liquidity position of firms during favorable financing conditions, and the ongoing buoyant economic activity, NPL collections from commercial loans maintained their positive trajectory in the first quarter of 2024 (Chart IV.1.22). The ratio of corporate NPL collections to net NPL additions slightly lost momentum; however, it remains above its long-term average (Chart IV.1.23).

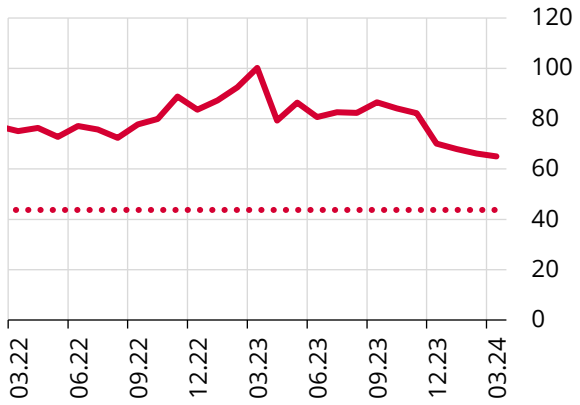
**Chart IV.1.22: Components of Corporate NPL Balance** (Billion TL)




Source: CBRT Last Observation: 03.24

Note: Series for collections and additions are based on three-month totals. An outlier was excluded from the data for 2022. Additions are calculated by subtracting the migrations to performing loans from new NPL additions.

**Chart IV.1.23: Corporate Collections/Additions Ratio** (%)

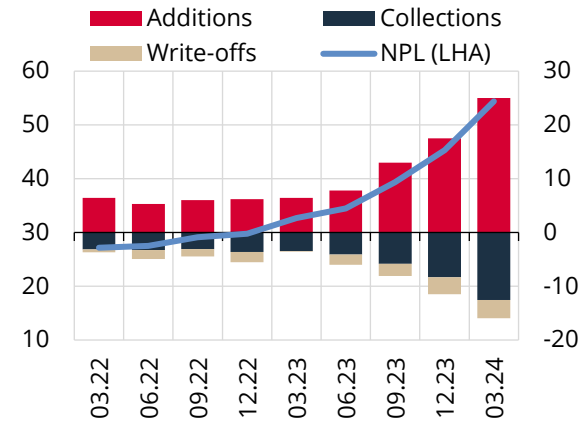



Source: CBRT Last Observation: 03.24

Note: The Collections/Additions ratio is calculated as the ratio of 12-month total NPL collections to 12-month total net NPL additions. Dashed line indicates the average of the relevant series for the 2014-2019 period. An outlier was excluded from the data for 2022. Additions are calculated by subtracting the migrations to performing loans from new NPL additions.

The retail NPL balance further increased as new NPL additions exceeded NPL collections and asset write-offs (Chart IV.1.23). The ratio of NPL collections to additions in the retail segment fell below its long-term average (Chart IV.1.24).

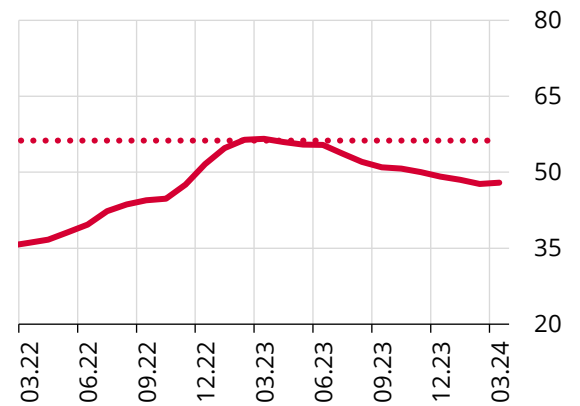
**Chart IV.1.24: Components of Retail NPL Balance** (Billion TL)




Source: CBRT Last Observation: 03.24

Note: Series for collections and net additions are based on three-month totals. Additions are calculated by subtracting the migrations to performing loans from new NPL additions.

**Chart IV.1.25: Retail Collection/Addition Ratio** (%)




Source: CBRT Last Observation: 03.24

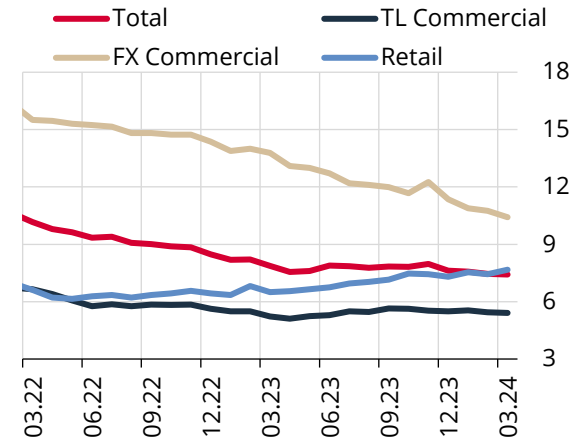
Note: The Collections/Additions ratio is calculated as the ratio of 12-month total NPL collections to 12-month total NPL additions. Dashed line indicates the average of the relevant series for the 2014-2019 period. Additions are calculated by subtracting the migrations to performing loans from new NPL additions.

**Stage 2 loans display a similar pattern to that of NPL realizations. While the Stage 2 loan ratio for commercial loans continue to decline, the Stage 2 loan ratio for retail loans has increased.**

The share of Stage 2 loans in total loans declined substantially in recent years, and was flat at close to 8% as of the second half of 2023 (Chart IV.1.26). The Stage 2 ratios of FX corporate loans have been hovering above other loan types for a long time. This is attributed to the classification in Stage 2 of firms with low FX income that faced difficulties in payment following the exchange rate developments in 2018 and whose FX loans were restructured. The removal of these loans from the Stage 2 classification over time has been effective in the decline of this ratio. On the other hand, as of the second half of the 2023, the share of Stage 2 loans of retail loans slightly increased due to the tightening in financial conditions.

The share of the sum of Stage 2 and NPLs in gross loans, a measure of total credit risk, has improved significantly as of the end of 2021, and fell below 9% (Chart IV.1.27). The share of the sum of NPLs and overdue Stage 2 loans, another measure of credit risk, is on the rise.

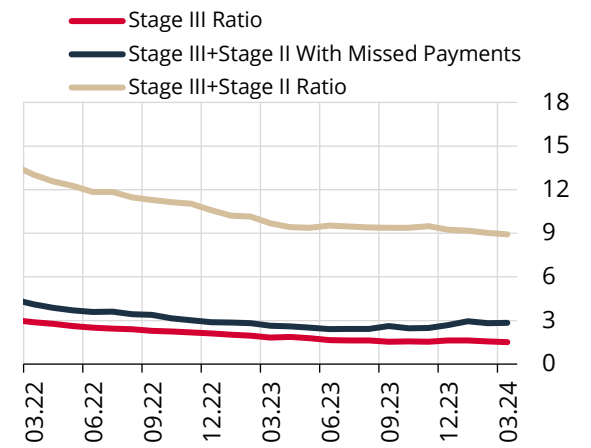
**Chart IV.1.26: Ratio of Stage 2 Loans** (%)




Source: CBRT Last Observation: 03.24

Note: Series show the ratio of Stage 2 loans to gross loans.

**Chart IV.1.27: Asset Quality Outlook** (%)



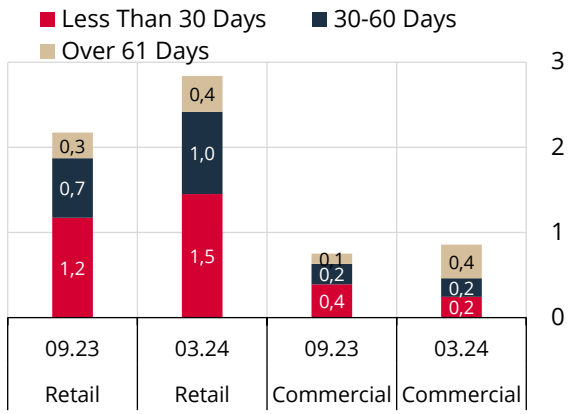

Source: CBRT Last Observation: 03.24

Note: Asset quality indicators are proportioned to gross loans.

**The ratio of overdue retail loans has risen, while that of commercial loans has shown no significant change.**

Banks have been using the TFRS-9 standard for loan classification since 2018 and even if the loans are not past due, they monitor them under Stage 2 if their models suggest a significant increase in credit risk. Accordingly, 82% of Stage 2 loans are not overdue but classified under Stage 2 loans due to a significant increase in credit risk based on banks' TFRS-9 models. A significant portion of overdue loans are classified under less than 30 days overdue. As of March 2024, the ratio of overdue loans in the commercial segment was almost flat at 0.9% over the past six months. The ratio of overdue loans in retail loans increased by 0.7 percentage points to 2.8%. In all loan delinquencies, the ratio of overdue retail loans increased (Chart IV.1.28). The breakdown of retail loans by subgroups reveals that the overdue ratio increased in general-purpose loans and credit cards (Chart IV.1.29).

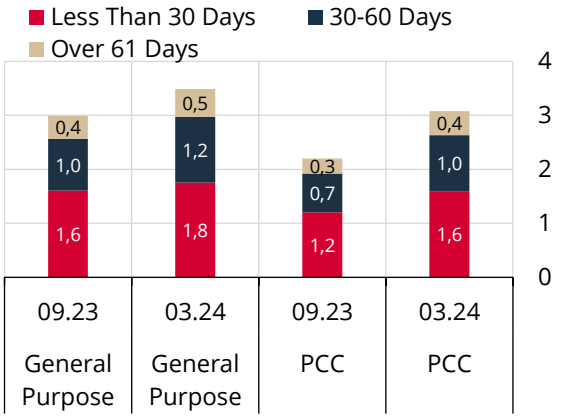
**Chart IV.1.28: Ratio of Overdue Loans** (%)




Source: CBRT Last Observation: 03.24

Note: The chart shows the ratio of overdue Stage 2 loans to gross loans.

**Chart IV.1.29: Ratio of Overdue Loans** (%)

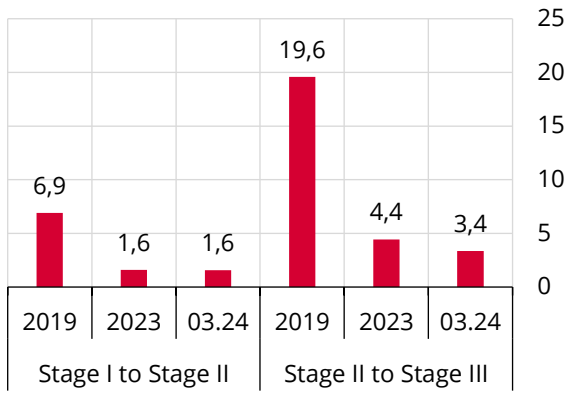



Source: CBRT Last Observation: 03.24

Note: The chart shows the ratio of overdue Stage 2 loans to gross loans.

As a further indicator of credit riskiness, the probability of transition from Stage 1 to Stage 2 and from Stage 2 to NPL is monitored. Compared to the 2019 average, transition probabilities declined significantly for both from Stage 1 to Stage 2 and from Stage 2 to NPLs. However, the 2023 average indicates that the probability of transition from Stage 1 to Stage 2 for commercial loans remained flat, and that from Stage 2 to NPL decreased slightly (Chart IV.1.31). On the other hand, the ratios of protested bills and bounced checks increased slightly as of the second half of 2023. The ratio of bad checks to total checks submitted to banks increased from 1.1% in June 2023 to 1.6% in March 2024, while that of protested bills to commercial notes received for collection increased from 0.9% to 1.6% for the same period (Chart IV.1.31).

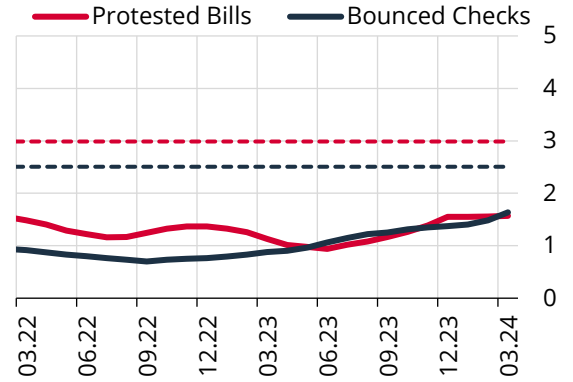
**Chart IV.1.30: Transition Probabilities** (Commercial Loans, %)




Source: CBRT Last Observation: 03.24

Note: The transition probability from Stage 1 to Stage 2 is estimated as the ratio of the loan amount migrating from Stage 1 to Stage 2 a year ago to the Stage 1 loan balance a year ago. The transition probability from Stage 2 to NPL is estimated as the ratio of the loan amount migrating from Stage 2 to NPL a year ago to the Stage 2 loan balance a year ago.

**Chart IV.1.31: Ratios of Protested Bills and Bad Checks** (6-Month MA, %)



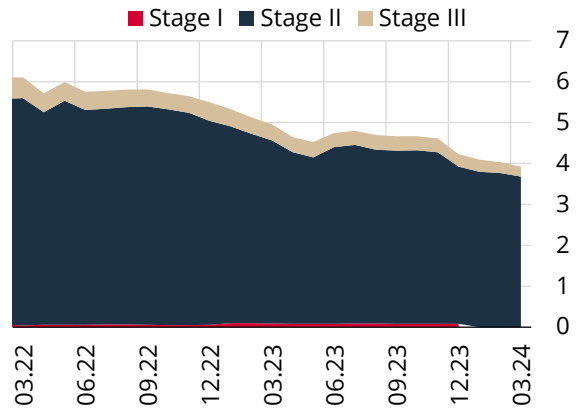

Source: CBRT Last Observation: 03.24

Note: Denotes the ratio of bad checks to total checks submitted to banks and the ratio of protested bills to commercial bills collected. Dashed lines indicate the average of the 2014-2022 period.

**The restructured loan ratio continues to decline, while banks preserve their policy of high provisioning against potential loan losses.**

Restructuring of loans, which was widely used to provide flexibility in cash management for firms with increased credit riskiness in 2019 and throughout the pandemic, displayed a downward trend in the following period, and the ratio of restructured loans to gross loans dropped to 4% (Chart IV.1.34). Among the restructured loans, 92% are under Stage 2, 6% are under NPL, and only a very limited percentage are monitored under Stage 1. The banking sector prudently allocates high provisions for restructured loans. Provision ratios for loans for Stage 1, Stage 2, and NPL are 0.9%, 22.2%, and 81.8%, respectively (Chart IV.1.35). The provision ratio for Stage 2 loans that are restructured (31.2%) is above the provision ratio for the rest of Stage 2 loans (17.1%). The high provisioning by banks in a period of strong loan repayments may limit the impact of potential loan collection issues on banks' balance sheets and profitability in the upcoming period.

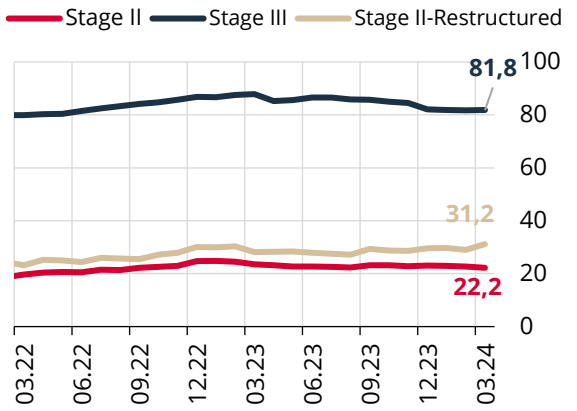
**Chart IV.1.34: Restructured Loans** (%)




Source: CBRT Last Observation: 03.24

Note: Series show the ratio of restructured loans to gross loans. Stage 1: Ratio of restructured loans monitored under standard loans. Stage 2: Ratio of restructured loans under close monitoring loans.

**Chart IV.1.35: Expected Loss Provisioning Ratio** (%)



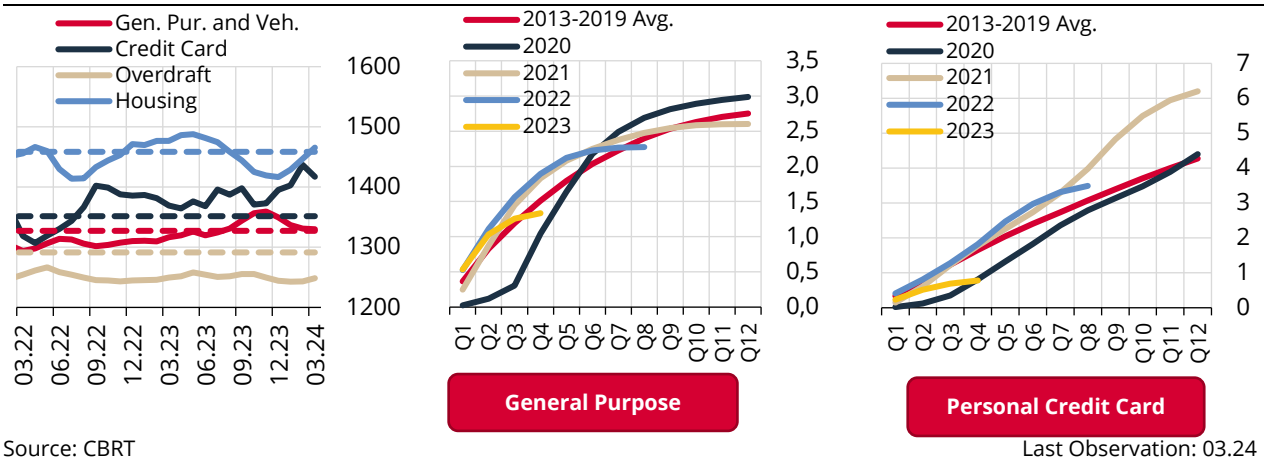

Source: CBRT Last Observation: 03.24

Note: Expected loss provisioning ratio is the ratio of the expected loss provision of the loan in the related category to the loan amount in that category.

**The share of individuals with slightly lower credit ratings among retail loan applicants has risen amid the increase in loan interest rates.**

In the second half of 2023, customers with relatively high credit scores applied for PCCs and general-purpose loans. However, in 2024, a period of tightening financial conditions, particularly interest rates, led to a slight decline in the retail credit scores of those applying for these loan products. High costs lowered the loan applications of customers with high credit ratings (Chart IV.1.36). The conversion performance of general-purpose loans and personal credit cards to NPL starting from the year of disbursement can be monitored by aging analysis. Accordingly, the NPL performance of general-purpose loans extended in 2020 during the pandemic negatively diverged from that of other years starting from the fifth quarter. This was caused by the increase in NPLs due to the termination of loan classification flexibilities provided during the pandemic. There is no significant divergence in the NPL performance of general-purpose loans extended in other years. The NPL conversion ratio of general-purpose loans extended in 2023 is currently around 1%. As for personal credit cards, 2021 diverges negatively from other years, however, the first four quarters of 2023 show a better performance than the average of the previous period (Chart IV.1.36)

**Chart IV.1.36: Personal Credit Rating and Aging Analysis**




Source: CBRT

Last Observation: 03.24

Note: Personal credit ratings indicate the average credit rating of credit applicants in the respective period. Based on a 3-month moving average. Dashed lines show the average of 01.20-03.24 period. Aging analysis shows the cumulative development of NPL ratios for loans extended in the respective year across quarters. The figures are expressed as percentages.

## Box IV.1.I: Personal Credit Card Limit and Utilization Trends

### Introduction

The ease of use of credit cards and the relatively low level of credit card interest rates in a high inflation environment from 2022 to the third quarter of 2023 led the PCC balance growth to hit a historically high level. After 2022, there was also a notable and faster-than-inflation hike in credit card limits. Between January 2022 and January 2024, a period marked by a 2.6-fold increase in CPI, the average increase in PCC limits was 7-fold and in balances approximately 5-fold, which makes the analysis of the recent developments in view of limit groups important. In this box, PCC developments are analyzed in terms of limit groups and limit increase categories. In addition, limit increases as well as card usage preferences during the inflationary period are evaluated. The findings of the study suggest that limit increases are well above inflation in the highest limit group (above TRY 500,000), while limit increases are parallel to inflation in the lower limit segment (below TRY 100,000).

### Personal Credit Card Limit Groups and Card Utilization Trends

As of January 2024, the total credit card limit allocated to individuals reached TRY 4.2 trillion and the total card balance hit TRY 1.3 trillion (Table IV.1.I.1). Accordingly, the limit utilization rate, which refers to the portion of the limit used, is 30% on average, and the card balance per person is approximately TRY 45,500. An analysis of individuals in the limit groups based on the total limit amount in all banks reveals that individuals with a limit of TRY 200,000 and above have more than half of the total PCC debts. Moreover, 1.4 million individuals (5% of the total number of cardholders) in the limit group above TRY 500,000 account for 25% of the total credit card balance. In other words, credit card holders with high limits have a significant portion of the overall credit card debt. While 51.6% of the credit card limits of individuals with credit card limits up to TRY 50,000 turn into debt balances, the limit utilization of individuals in upper limit groups is relatively low. The fact that the share of expenditures in installments is around 30% in all limit groups indicates that credit cards are mainly used for payment purposes through the non-installment channel.

**Table IV.1.I.1: Personal Credit Card Indicators Based on Limit Groups**

| | **Total Limit** (TRY Billion) | **Total Balance** (TRY Billion) | **Shares in Total Balance** (%) | **Limit Utilization Rate** (%) | **Share of Installments** (%) | **Number of People** (Million) |
|---|---|---|---|---|---|---|
| TRY 0 – 50,000 | 171.3 | 88.3 | 7.0 | 51.6 | 23.4 | 8.7 |
| TRY 50,000 – 100,000 | 417.5 | 154.5 | 12.3 | 37.0 | 32.5 | 5.6 |
| TRY 100,000 – 200,000 | 965.2 | 289.0 | 22.9 | 29.9 | 34.1 | 6.7 |
| TRY 200,000 – 500,000 | 1,566.3 | 407.2 | 32.3 | 26.0 | 31.9 | 5.3 |
| Above TRY 500,000 | 1,130.9 | 321.3 | 25.5 | 28.4 | 32.2 | 1.4 |
| **Total** | **4,251.2** | **1,260.3** | **100.0** | **29.6** | **32.0** | **27.7** |

Sources: CBRT, Risk Center Observation Date: 01.24

In addition to this picture of the distribution of limits and balances, the historical development of credit card limits and the borrowing trends within these limits were analyzed. The examination was performed on a random sample that significantly represents the distributions in the total population. The sample of 655,750 observations includes individuals with a limit of TRY 50,000 and above as of January 2024, and January data for the period between 2015 and 2024 were used in the analysis (t=10, n=65,575). While considering the individuals with card debt for each period, heterogeneity among individuals is controlled by keeping the individuals constant in the sample over the years.

Firstly, the inflation-adjusted limit and balance developments of the individuals in the groups based on their limit amounts in January 2024 were analyzed. Individuals' limits were deflated by backward indexation and the past limits of these individuals in real terms were compared. Charts IV.1.I.1 and IV.1.I.2 show the historical average real limit and balance levels of the groups based on the current limit amounts.

**Chart IV.1.I.1: Personal Credit Card Real Limits** (TRY Thousand)

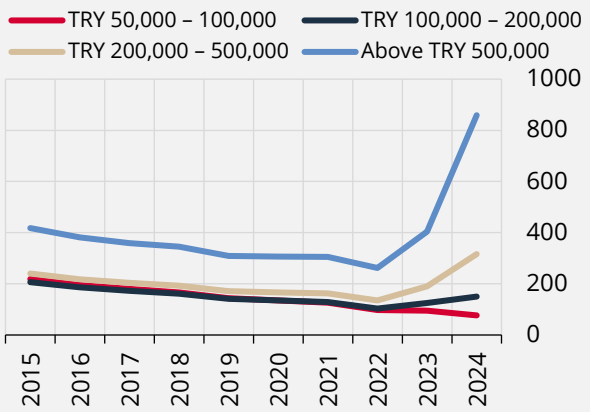
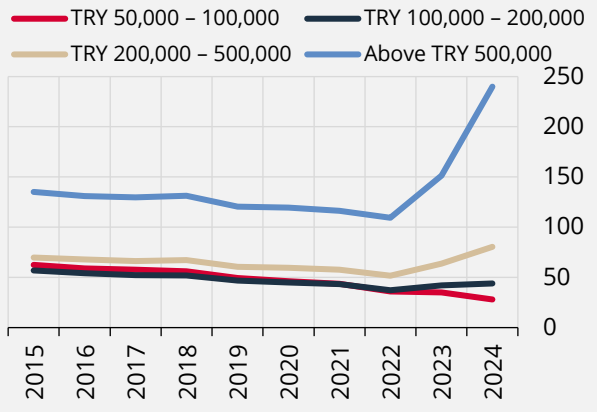



**Chart IV.1.I.2: Personal Credit Card Real Balance** (TRY Thousand)




Sources: Risk Center, Authors' estimations Last Observation: 2024

Note: In real balance and limit calculations, nominal balance and limit values of the past year were expanded by CPI. Limit groups of individuals for the 2015-2024 period were set according to the limit size in January 2024 (TRY 50,000 - 100,000, TRY 100,000 - 200,000, TRY 200,000 - 500,000 and above TRY 500,000).

PCC real limit and balance development differs over time among limit groups. Until 2022, real limits of the individuals in the sample shrank to a limited extent. On the other hand, real limits surged after 2022, chiefly in the limit groups of TRY 200,000 and above. The group with the limit of TRY 500,000 and above differed from the other limit groups to a great extent, and the limits quadrupled compared to 2022 and doubled compared to 2023. While the real balance remained relatively more stable in groups with limits of TRY 200,000 and below, it jumped in higher limit groups as of 2022 (Charts IV.1.I.1 and IV.1.I.2). Moreover, a similar trend was seen in all limit groups before 2022, while the change in card limits and balances of individuals with high limits after 2022 diverged significantly from those of low limit groups.

**Chart IV.1.I.3: Limit and Balance Change Based on Limit Increase Categories** (As Multiples of Limit and Balance for January 2022)

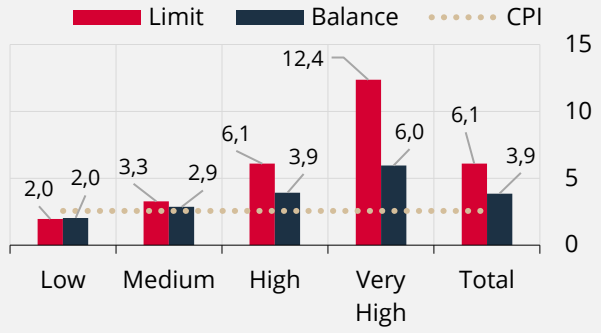
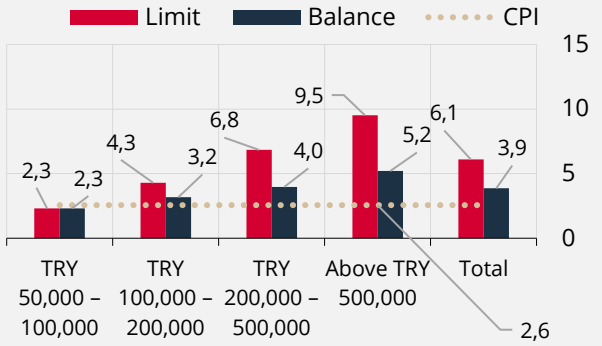



**Chart IV.1.I.4: Limit and Balance Change Based on Limit Groups** (As multiples of the Limit and Balance for January 2022)




Sources: Risk Center, Authors' estimations Last Observation: 2024

### Limits and Balances in a Period of High Inflation

In this part of the study, the rate of increase in credit card limits and balances between January 2022 and January 2024 is analyzed based on median observations according to categories of limit groups and limit increase. Limit increase categories are defined as 'low' (individuals with limit increases below inflation), 'medium' (individuals with limit increases above inflation and in the first 25% of the sample), 'high' (individuals with limit increases between 25 and 75% of the sample) and 'very high' (individuals with limit increases above 75% of the sample).

In this period when CPI rose 2.6-fold, the credit card limit surged by approximately 6.1-fold and the credit card balance by 3.9 times, which implies that in the recent period of high inflation, limit increases that exceeded what was necessary were provided for certain limit groups and categories (Charts IV.1.I.3 and IV.1.I.4). While the limits of individuals in the TRY 50,000 to TRY 100,000 group rose by 2.3 times, this value increased in the upper limit

groups and reached 9.5 for individuals with a limit of TRY 500,000 and above. This trend from lower limit groups to upper limit groups prevails across all limit increase categories (Table IV.1.I.2). This indicates that the tendency to increase limits beyond the need motive is stronger in the upper limit groups.

**Table IV.1.I.2: Limit Change** (As multiples of the Limit for January 2022)

| | | Limit Group as of January 2024 | | | | |
|---|---|---|---|---|---|---|
| | | TRY 50,000 – 100,000 | TRY 100,000 – 200,000 | TRY 200,000 – 500,000 | Above TRY 500,000 | **Total** |
| **Limit Increase Categories** | Low | 1.8 | 2.0 | 2.2 | 2.2 | **2.0** |
| | Medium | 3.1 | 3.3 | 3.3 | 3.5 | **3.2** |
| | High | 4.3 | 5.4 | 6.3 | 6.8 | **6.1** |
| | Very High | - | 9.5 | 11.5 | 13.8 | **12.4** |
| | **Total** | **2.3** | **4.3** | **6.8** | **9.5** | **6.1** |

Sources: Risk Center, Authors' estimations

Note: Values in the table are individuals' median "$Limit_{01.2024}$ / $Limit_{01.2022}$" values under the relevant group and category.

We see that, unlike the changes in limits, the increase in balances in the 2022-2024 period was relatively similar across the various limit groups and categories (Table IV.1.I.3). The median credit card limit increased by 6.1 times and the credit card balance rose by 3.9 times in the said period, supporting the view that limit increases beyond the motive of need were granted to certain limit groups and categories. On the other hand, given the two-way interaction, high limit increases may have brought about high expenditures and elevated PCC balances. In the limit group of TRY 50,000-TRY 100,000, balances rose as much as the limit increased, implying that this group did not witness a noticeable change in their abilities and habits in card utilization. As a matter of fact, the increase in balances of this group hovers quite close to the increase in CPI. On the other hand, the increase in the difference between limit increases and balance increases in higher denomination groups indicates that additional standing limit facilities have been obtained.

**Table IV.1.I.3: Balance Change** (As multiples of the Limit for January 2022)

| | | Limit Group as of January 2024 | | | | |
|---|---|---|---|---|---|---|
| | | TRY 50,000 – 100,000 | TRY 100,000 – 200,000 | TRY 200,000 – 500,000 | Above TRY 500,000 | **Total** |
| **Limit Increase Categories** | Low | 1.9 | 2.1 | 2.2 | 2.0 | **2.0** |
| | Medium | 2.9 | 2.8 | 2.9 | 3.2 | **2.9** |
| | High | 3.5 | 3.9 | 3.7 | 4.3 | **3.9** |
| | Very High | - | 5.3 | 5.0 | 6.6 | **6.0** |
| | **Total** | **2.3** | **3.2** | **4.0** | **5.2** | **3.9** |

Sources: Risk Center, Authors' estimations

Note: Values in the table are individuals' median "$Balance_{01.2024}$ / $Balance_{01.2022}$" values under the relevant group and category.

## Conclusion and Assessments

Claiming ex-post installments for credit card expenditures or not paying the debt at all and allowing interest payments to accrue may weigh on the default risk of individuals, mostly in periods of mounting borrowing costs. Recently, it has been observed that the rapid growth of credit card balances was driven by borrowers with the highest limits. High limits granted to individuals may lead to spending behavior and consumption demand that is inconsistent with their incomes. It should be noted that the utilization of high-limit cards for non-essential purposes may adversely affect not only the current account balance through the consumption and imports of intermediate goods channels but also inflation through the pulled-forward demand channel. Although it is more critical in the high limit group, setting credit card limits and payment terms in line with individuals' incomes[1] and inflation is important to financial stability as well as the current account balance and price stability.

[1] As per the regulation, the total limit of individuals' credit cards is limited to a maximum of four times their monthly net documented income.

# Box IV.1.II: Loan Behavior of Firms Based on Borrowing Rate Structure

Financing costs remained low throughout 2022 and in the first half of 2023, while the upper limits introduced for commercial loan rates in August 2022 in the scope of the securities maintenance practice caused commercial loan rates to stay significantly below inflation until June 2023. In that period, banks shortened loan maturities and concentrated on floating-rate loans as part of their interest rate risk management. Starting from the second half of 2023, the rise in commercial loan rates led to an increase in the interest rate risk borne by firms that had used floating-rate loans in the previous period.

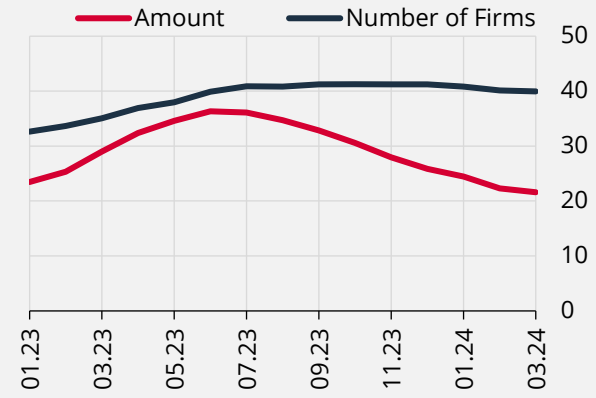
This box examines the post-tightening credit risk outlook and the change in loan composition of firms that had made intensive use of floating-rate loans before the tightening. It offers a comparative analysis of the evolution of loan preferences and the interest rate risk management of firms that had opted for floating-rate borrowing in the previous period. The analysis reveals that the floating-rate loan utilization has decreased across the sector due to increased financing costs. As of August 2023, the Turkish lira (TL) loans of firms borrowing predominantly at floating rates remained flat, and these firms were found to have tended more towards FX loans than firms that predominantly took out fixed-rate loans. On the other hand, no significant deterioration was observed in the credit risk indicators of firms that had opted for floating-rate loans.

The study employs firm- and loan-based data to identify the firm groups that predominantly use either floating-rate loans or fixed-rate loans. Accordingly, firms with a minimum 50% share of floating-rate TL commercial loans in their total TL commercial loans are categorized as floating-rate borrower firms:

$$\text{Criterion for Being a Floating} - \text{Rate Borrower Firm} = \left(\frac{Floating - Rate\ TL\ Commercial\ Loans\ of\ the\ Firm}{Total\ TL\ Commercial\ Loans\ of\ the\ Firm} > \%50\right)$$

On the other hand, firms with a 50% or smaller share of floating-rate TL commercial loans in their total TL commercial loans are categorized as fixed-rate borrower firms. The share of floating-rate borrower firms' TL commercial loan balance in total TL commercial loans reached 36.3% in June 2023 before falling due to the monetary tightening and increased financing costs. Amid tighter financial conditions, the upward course in the share of floating-rate borrower firms stopped, and their share in total TL loans dropped to 22% as of March (Chart IV.1.II.1). The marked fall in loan shares despite the flat course in the number of firms implies that the new TL commercial loan utilization of floating-rate borrower firms is significantly below that of the sector.

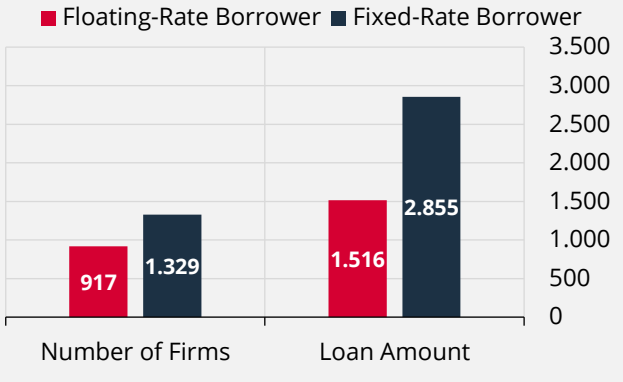
**Chart IV.1.II.1: TL Commercial Loan Share of Floating-Rate Borrower Firms** (%)




Sources: CBRT, Authors' Calculations Last Observation:03.24

Note: Shows the share of the number of floating-rate borrower firms and the total amount of their TL commercial loans for the relevant month in the total. Firms may change each month depending on their loan composition.

**Chart IV.1.II.2: Number of Firms in the Sample and Their TL Loan Amount** (Billion TL, Thousand Firms)



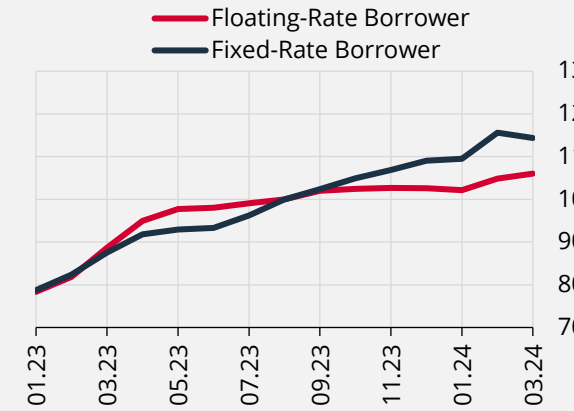

Sources: CBRT, Authors' Calculations Last Observation: 08.23

Note: Shows the numbers of floating-rate and fixed-rate borrower firms in August 2023 as well as the amount of floating-rate TL commercial loans used by each group.

The following section includes analyses to separate out the changes in loan behavior of floating-rate borrower firms by taking into account cross-firm differences, using a fixed sample of firms. The sample of firms is determined based on data for August 2023, when the share of floating-rate loans in stock loans reached high levels and the policy rate was raised sharply. The firms in this period are categorized into two groups according to their interest rate structure. Based on this information, results regarding the changes in borrowing behaviors of each group from August 2023 to March 2024 and their credit risk outlook are presented in comparison. In the sample, the number of floating-rate borrower firms was approximately 917 thousand while that of fixed-rate borrower firms was 1.33 million as of August 2023. In the same period, total TL commercial loans of floating-rate and fixed-rate borrower firms amounted to TL 1.5 trillion and TL 2.9 trillion, respectively (Chart IV.1.II.2).

When the TL commercial loan amount in August 2023 is taken as 100, the TL commercial loan balance of floating-rate borrower firms remained flat in the following period but that of the other group continued to increase in the post-tightening period (Chart IV.1.II.3). Thus, floating-rate borrower firms can be assumed to have reduced their TL loan demand in order to manage their debts effectively. On the other hand, it can also be inferred that banks offered a more limited supply of commercial loans to floating-rate borrower firms in view of the potential interest rate risk of these firms. It is also noteworthy that firms in both groups significantly reduced their floating-rate TL loan balances in the post-tightening period (Chart IV.1.II.4). Specifically, the relevant loan amount for floating-rate borrower firms declined by approximately 25% in nominal terms. This indicates that firms have managed their interest-sensitive debts effectively.

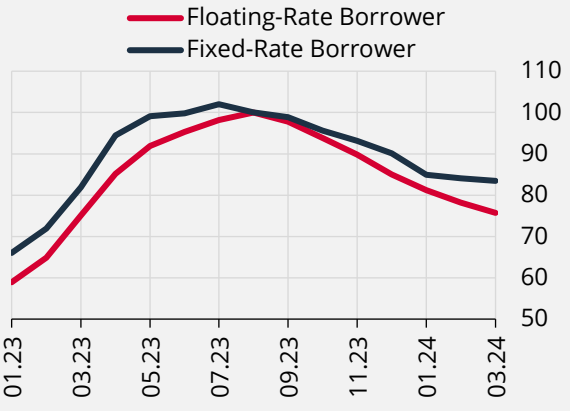
**Chart IV.1.II.3: Change in TL Commercial Loans** (Index, 08.23=100)




Source: CBRT Last Observation: 03.24

Note: The change in total TL commercial loans used by floating- and fixed-rate borrower firms is indexed to August 2023. The sample covers firms in August 2023.

**Chart IV.1.II.4: Change in Floating-Rate TL Loans** (Index, 08.23=100)



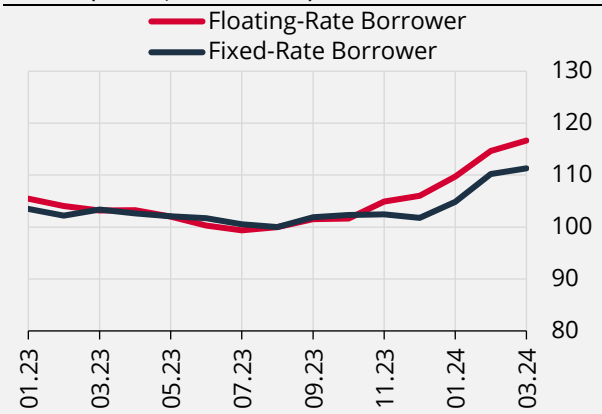

Source: CBRT Last Observation: 03.24

Note: The change in floating-rate TL commercial loans used by floating- and fixed-rate borrower firms is indexed to August 2023. The sample covers firms in August 2023.

A look at the change in FX loans of firms in the sample reveals that the two firm groups had similar movements before the tightening. However, after the monetary tightening, floating-rate borrower firms recorded higher FX loan growth rates than fixed-rate borrower firms (Chart IV.1.II.5). While approximately 43% of the loan portfolio of floating-rate borrower firms was composed of FX loans, this ratio remained limited to 30% in the other group (Chart IV.1.II.6). This shows that floating-rate borrower firms opted for FX loans in their loan preference, while the preference for FX loans was moderate in the other group. Floating-rate borrower firms are assessed to have substituted FX loans for their declining floating-rate TL loan balances.

Lastly, we analyze the evolution of the credit risk outlook of the two groups. While for both groups non-performing loans (NPLs) and Stage 2 loans, which pose a risk to their credit quality, registered similar growth rates in the period before August 2023, floating-rate borrower firms diverged from the other group slightly in the upward direction during the monetary tightening period (Chart IV.1.II.1.7).

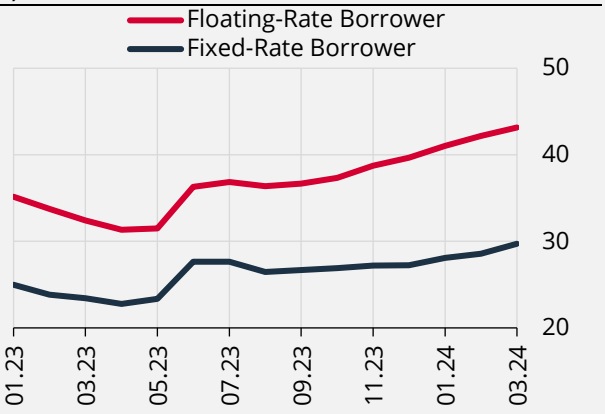
**Chart IV.1.II.5: Change in FX Commercial Loans** (Index, 08.23=100)




Sources: CBRT, Authors' Calculations Last Observation:03.24

Note: The change in FX commercial loans used by floating- and fixed-rate borrower firms is indexed to August 2023. The sample covers firms in August 2023.

**Chart IV.1.II.6: Share of FX Commercial Loans** (%)

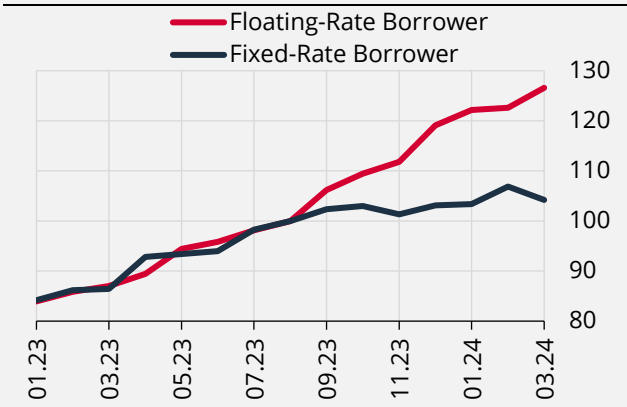



Sources: CBRT, Authors' Calculations Last Observation: 03.24

Note: Shows the share of FX commercial loan balance of floating- and fixed-rate borrower firms in their total commercial loans. The sample covers firms in August 2023.

In the tightening period, the share of NPLs and Stage 2 loans increased among floating-rate borrower firms but decreased in the other group (Chart IV.1.II.1.8). However, floating-rate borrower firms have lower NPL and Stage 2 loan ratios than the other group in general, and the amount of their risky loans is still below the sector's average despite an increase in their credit risk. Additionally, NPL and Stage 2 loan balances of floating-rate borrower firms account for only a 20% share in the sector in the current period. Although the credit quality of these firms has been impaired slightly, the share of this impaired amount in total loans remains very small.

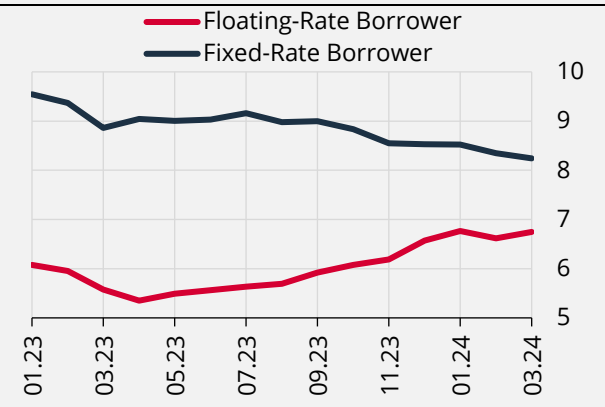
**Chart IV.1.II.7: Change in Non-Performing and Stage 2 Loans** (Index, 08.23=100)




Sources: CBRT, Authors' Calculations Last Observation: 03.24

Note: The change in non-performing and Stage 2 loans of floating- and fixed-rate borrower firms is indexed to August 2023. The sample covers firms in August 2023.

**Chart IV.1.II.8: Share of Non-Performing and Stage 2 Loans** (%)




Sources: CBRT, Authors' Calculations Last Observation: 03.24

Note: Shows the share of non-performing and Stage 2 loans of floating- and fixed-rate borrower firms in their total loans. The sample covers firms in August 2023.

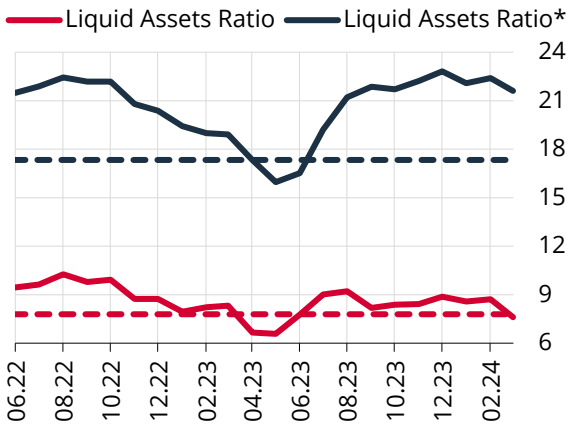
To conclude, TL commercial loan balances of floating-rate borrower firms have been flat, and these firms have increased their FX loan shares by diversifying their financing types. Moreover, the deterioration in credit risk indicators of firms that are more sensitive to interest rate changes remained low during the upward trend in loan rates. Therefore, risks to the corporate sector that may arise from increased financing costs are assessed to have a possibly limited impact on the asset quality of the banking sector.

# IV.2 Liquidity Risk

**Banks' liquid assets hover close to their historical average.**

Having trended upwards in the second half of 2023, the liquid assets ratio declined partially in the first quarter of 2024 and converged to its historical average. The liquid assets indicator including reserve requirements (RRs) continued to hover well above the historical average (Chart IV.2.1). Following the increase in RR ratios to sterilize the liquidity mainly stemming from exchange rate difference payments to FX-protected deposits (KKM), the liquidity ratio has reached a high level. In the first quarter of 2024, the liquid assets ratio including RRs edged down due to the reduction in RRs maintained in line with the decline in the KKM balance. While the free account balance at foreign correspondent banks had an upward effect on the liquid assets ratio excluding RRs, the declining unencumbered GDS portfolio in the first quarter of 2024 had a downward effect (Chart IV.2.2). Due to the periodically high liquidity in the system in the first two months of the year, the unencumbered GDS balance increased as a result of the switch from blocked accounts, which banks used as collateral for open market operation (OMO) transactions, to free accounts. While the rise in the funding requirement of the system in March pushed banks to switch the unencumbered GDS used as collateral for OMO funding to blocked accounts, the unencumbered GDS ratio converged to its historical average. On 9 May 2024, with the termination of the securities maintenance practice, securities in blocked accounts were transferred to free accounts. Following this shift, banks' unencumbered GDS ratio is expected to go up by around 2 percentage points.

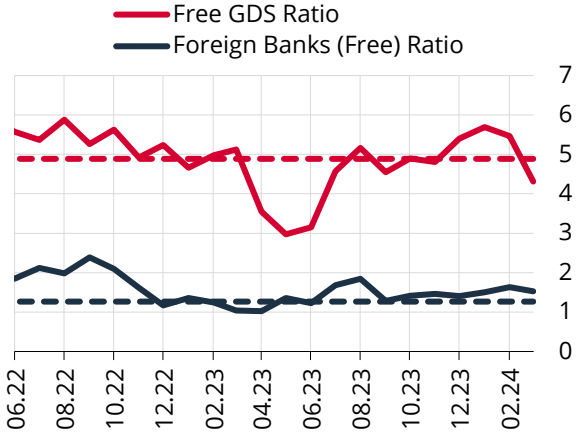
**Chart IV.2.1: Share of Liquid Assets** (%)




Source: CBRT Last Observation: 03.24

Note: Liquid Assets Ratio = (Cash Reserves+ Free Accounts at Foreign Banks+ Unencumbered GDS+ Reverse Repo Receivables+ Takasbank and BIST Interbank Market) / Assets. Liquid Assets Ratio*= (Cash Reserves+ Free Accounts at Foreign Banks+ Unencumbered GDS+ Reserve Requirements) / Assets. Dashed lines represent the average of each series between 2014 and 2021.

**Chart IV.2.2: Share of Selected Liquid Items** (%)




Source: CBRT Last Observation: 03.24

Note: Unencumbered GDS Ratio is the ratio of government debt securities that are not subject to collateral to assets. Foreign Banks (Free) Ratio = Free accounts at Foreign Banks / Assets. Dashed lines represent the average of each series between 2014 and 2021.

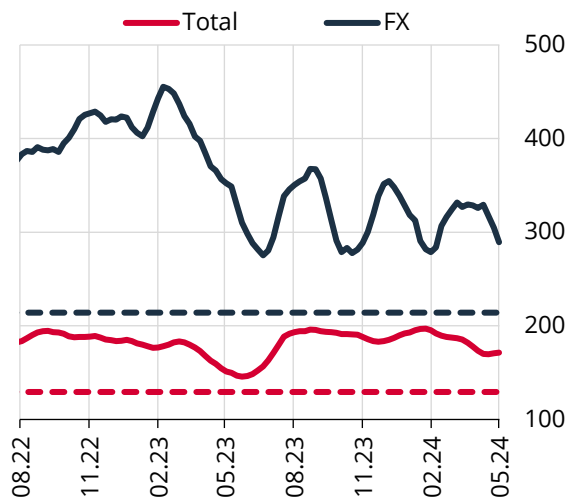
**The positive outlook is maintained in other liquidity indicators such as liquidity coverage ratio and loan/deposit ratio.**

Liquidity coverage ratios (LCR), which are indicators of banks' ability to meet net cash outflows within 30 days with high-quality liquid assets, hover above legal limits and their historical average (Chart IV.2.3). The banking sector's liquid assets are capable of meeting possible short-term cash outflows in both TL and FX. Since the second half of 2023, the FX LCR ratio has fluctuated following developments regarding currency inflows and outflows, CBRT swap transactions, capital movements, and FX deposit preferences.

The loan-to-deposit ratio (LDR) hit a historical low in the second half of 2023. In this period, while deposit growth accelerated due to exchange rate difference payments to FX-protected deposits, the LDR declined to 74% amid slowing loan growth. In the first quarter of 2024, despite a slight acceleration in loan growth, the LDR converged to

80%, driven by the shift from deposits to alternative investment instruments. As of April, the TL-denominated LDR has been on a declining trend due to the strong preference for TL deposits and slower TL loan growth (Chart IV.2.4). Meanwhile, deposits, as a stable source of funding, are significantly higher than loan balances, contributing positively to the sector's liquidity outlook.

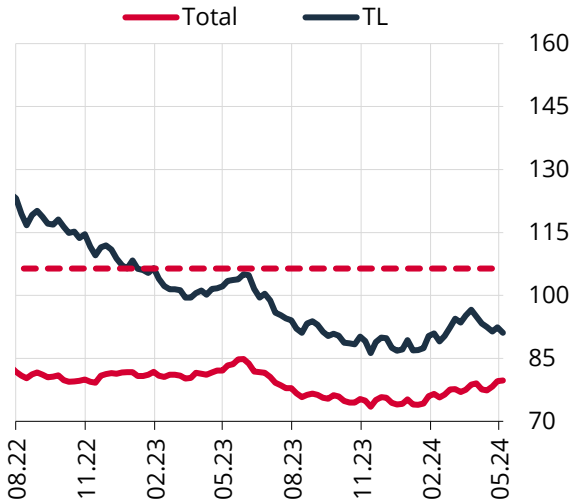
**Chart IV.2.3: Liquidity Coverage Ratios**
(4-Week MA, %)




Source: CBRT Last Observation: 10.05.24

Note: Development and investment banks (DIBs) are excluded. Based on nonconsolidated reports. Minimum legal limits for FX and total LCR are 100% and 80%, respectively. Dashed lines represent the average of each series between 2014 and 2021.

**Chart IV.2.4: Loan/Deposit Ratio** (%)




Source: CBRT Last Observation: 10.05.24

Note: DIBs are excluded. Loans extended to banks and bank deposits are not included. Dashed line represent the average of respective ratio between 2014 and 2021.

**While the excess Turkish lira liquidity in the system was sterilized through reserve requirements and deposit transactions, the liquidity created by foreigners' greater interest in Turkish assets and residents' increased preference for Turkish lira deposits since April caused net OMO funding to turn negative.**

Excess Turkish lira liquidity emerged in the system due to the exchange rate difference payments to KKM in the third quarter of 2023 as well as increased capital inflows, slow loan growth, and public transactions in the last quarter of the year. Excess liquidity was sterilized through deposit auctions and increases in the TL RR ratio in the related period (Chart IV.2.5). Banks' high liquidity levels put downward pressure on deposit rates, especially in January and February of 2024, which weakened monetary transmission and widened the gap between the policy rate and deposit rates. Turkish lira deposit rates rose and began to move in line with the policy rate, and the monetary policy transmission channel strengthened with the introduction of the Turkish lira reserve requirement practice for FX liabilities in February and renumeration on reserve requirements for banks that achieve their Turkish lira conversion targets, as well as the policy rate hike in March (Chart IV.2.7).

Since April, foreigners' increasing interest in Turkish assets and residents' accelerated switch from FX deposits to TL deposits have created excess liquidity, causing net OMO funding to turn negative (Chart IV.2.6). Deposit rates declined slightly due to the excess Turkish lira liquidity in May. The CBRT raised the reserve requirement ratios on 23 May in order to sterilize the excess Turkish lira liquidity in the system. Consequently, liquidity of approximately TRY 550 billion was withdrawn from the system.

**Chart IV.2.5: TL RR Balance** (14-Week MA, Billion TRY)

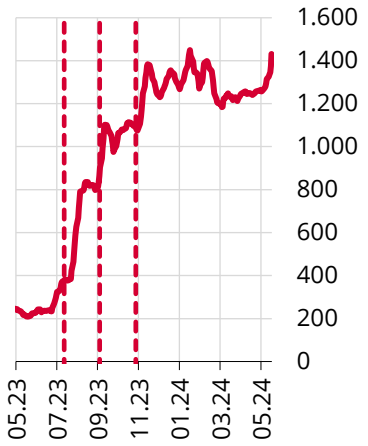



**Chart IV.2.6: CBRT Funding** (Billion TRY)

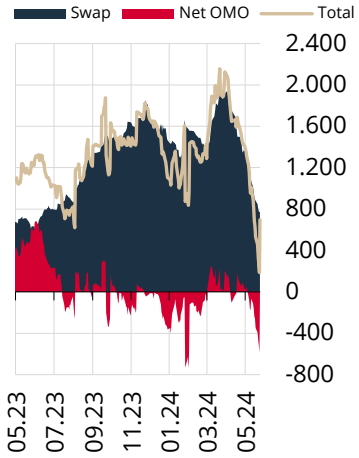
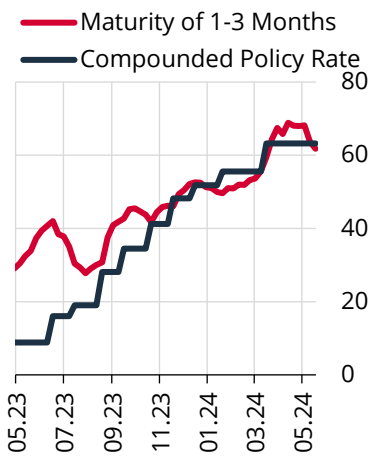



**Chart IV.2.7: TL Deposit Rates** (%)




Source: CBRT

Last Observation: 24.05.2024

Note: Dashed lines represent the RR decisions taken on 21 July 2023, 14 September 2023, and 2 November 2023 regarding the KKM accounts. Since the deposit rate is reported as compound, the chart is based on compound policy rate.

**While the share of TL deposits in the deposit composition increased significantly, that of the KKM accounts decreased.**

In addition to the monetary tightening steps, the regulations introduced in August 2023 to encourage the transition from KKM to TL deposits and to expand the share of TL deposits resulted in a TL 1.2 trillion decline in the KKM balance and a TL 3.6 trillion increase in TL deposits. Accordingly, the share of TL deposits in the deposit composition rose to 48%, while the share of KKM declined to 13%. Moreover, exchange rate and parity-adjusted FX deposits declined by USD 15.9 billion in the same period. The share of TL deposits is expected to grow further in the upcoming period given the current level of TL deposit rates and improving expectations (Charts IV.2.8 and IV.2.9). Moreover, on 23 May, the CBRT decided to reduce the total target including renewal to 75% and, upon achievement of this target, to decrease the remuneration rate applied to reserve requirements maintained for KKM accounts to 40% of the policy rate. These steps will contribute to the acceleration of the decline in the KKM balance by reducing the benefits of KKM accounts.

**Chart IV.2.8: Change in Deposits** (Billion TRY, Billion USD)

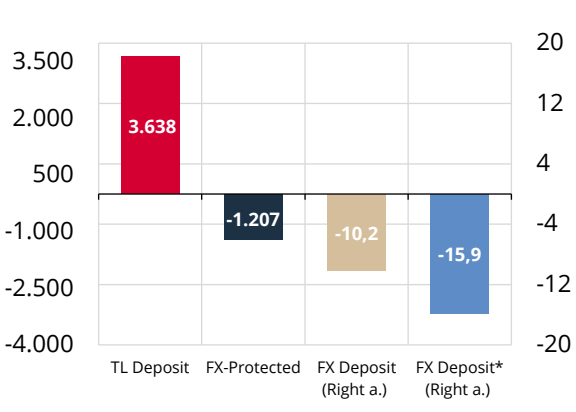
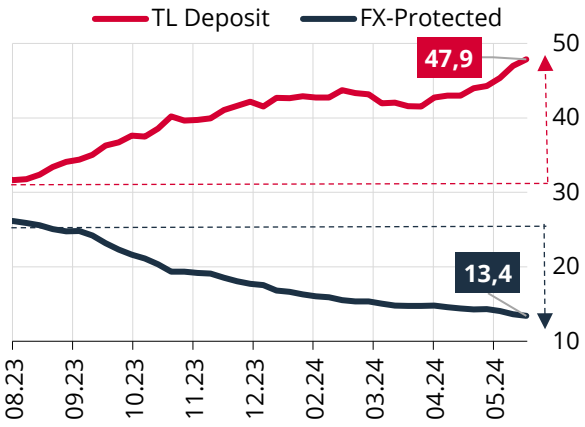



**Chart IV.2.9: Distribution of Deposits** (Share, %)




Source: CBRT

Last Observation: 24.05.24

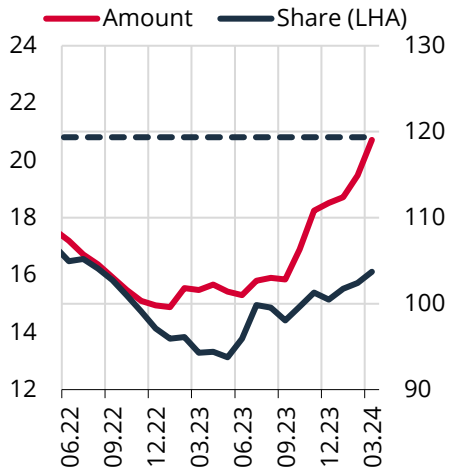
Note: TL deposits do not include the KKM balance. The change in deposits chart represents the change between 25 August 2023 and 24 May 2024. FX Deposit* balance is adjusted for exchange rate and parity effects.

**Banks' external debt rollover ratios have been rising owing to the decline in external financing costs following the improvement in the country risk premium.**

While the banking sector's external debt stock increased on the back of strong foreign investor interest and an improved country risk premium, the share of external debt in the funding composition rose to 16% (Chart IV.2.10). The external debt rollover ratios of banks, which benefited from long-term borrowing facilities with lower costs stemming from the decline in the CDS level, are on an upward trend. The rollover of banks' medium- and long-term external debt over 170% extends the average maturity of external debt (Chart IV.2.11). Long-term borrowing is also considered a factor that mitigates the risks arising from maturity mismatches in banks' balance sheets.

Increased access to external borrowing sources enabled banks to diversify their external debt composition. Having declined in the previous years, Eurobond issuances accelerated in the current reporting period, and the Eurobond balance exceeded USD 20 billion, thus reaching the level in 2021. Similarly, banks strengthen their capital by increasing their subordinated debts (Chart IV.2.12).

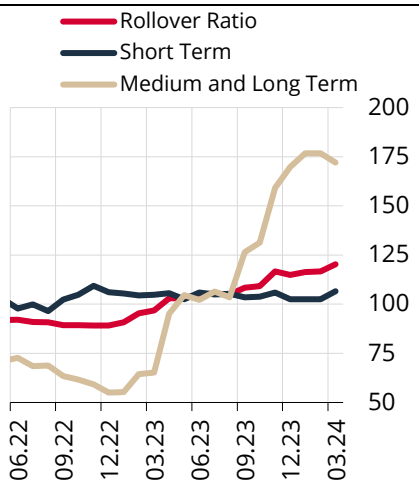
**Chart IV.2.10: External Debt and Share** (Billion USD, %)




Sources: CBRT, CSD

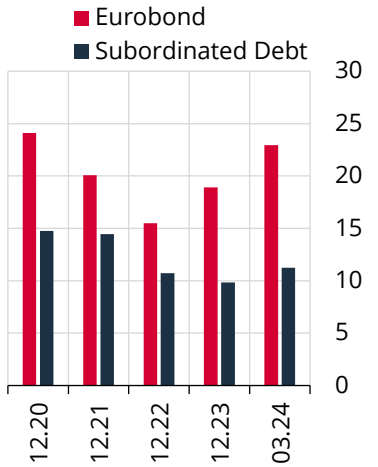
Note: Parity-adjusted amount. The USD equivalent of Euro-denominated external debts is recalculated by the parity value of June 2018. The dashed line is the 2014-2021 average of share series.

**Chart IV.2.11: External Debt Rollover Ratio** (%)




Note: External debt rollover ratios are calculated based on 6-month (for total), 3-month (for short-term) and 12-month (for long-term) moving totals of banks' total borrowings and repayments of external liabilities including securities issued abroad.

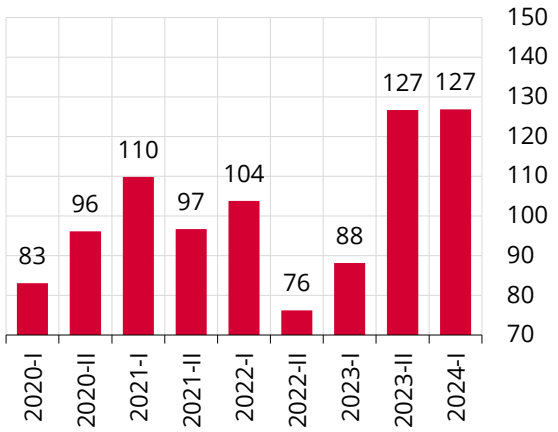
**Chart IV.2.12: Eurobond and Subordinated Debts** (Billion USD)




Last Observation: 03.24

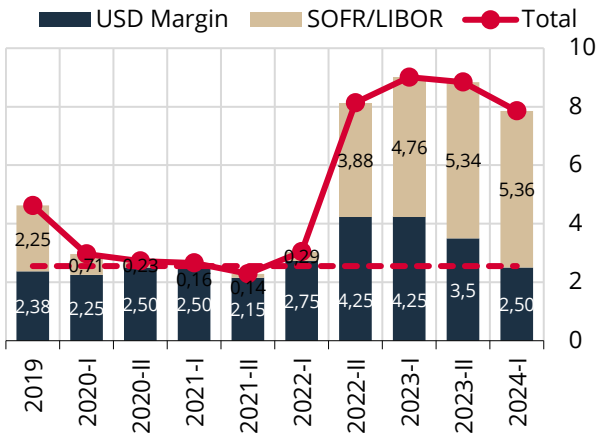
Syndicated loans are being renewed at high rates amid declining financing costs. In the first syndicated loan period of 2024, the average renewal rate of five banks was 127% (Chart IV.2.13). In other syndication transactions to be renewed in the first half of the year, banks' planned renewal rate is above 100%. Although the SOFR reference rate remained similar to the previous period, the fall in margins pushed down the total cost of syndicated loans. The risk premium in syndication transactions dropped by 175 basis points year-on-year and by 100 basis points compared to the transactions conducted in the last quarter of the previous year (Chart IV.2.14). In the upcoming period, banks' external borrowing demand will be driven by the course of FX external debt placement facilities, FX loan demand and CBRT swap facilities.

**Chart IV.2.13: Rollover Ratio of Syndicated Loans** (%)




Sources: CBRT, KAP Last Observation: 05.24

**Chart IV.2.14: Cost Margins of Syndicated Loans** (%)



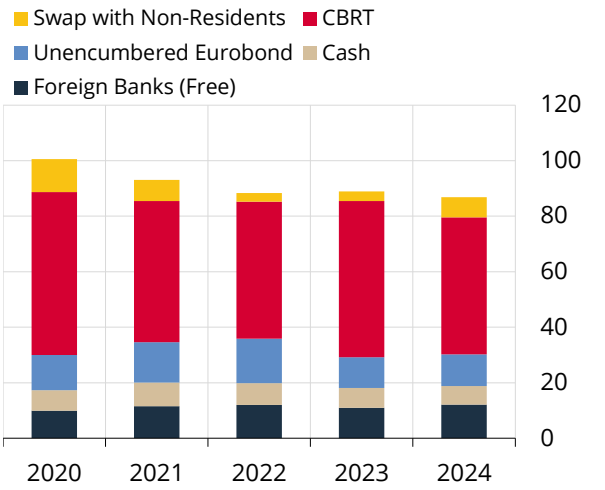

Sources: KAP, Bloomberg Last Observation: 05.24

Note: Calculated for five banks for the 2024-I period and ten large-scale banks excluding DIBs for previous periods. I and II represent April-June and October-December syndication periods of the respective year. The external debt rollover ratio is calculated as the ratio of total borrowing and repayments in the specified periods. The USD margin shows the interest rate applied in addition to the SOFR/LIBOR rate. The dashed line is the average of the total cost for 2014-2021 period.

**The sector's FX liquidity buffers against possible FX liquidity shocks remain strong.**

As of March 2024, banks held FX liquid assets worth USD 87 billion (Chart IV.2.15). As the sector's FX-denominated external debt stock that will fall due within one year to USD 55.1 billion, the capacity of FX liquid assets to cover short-term FX-denominated external debt is 158% (Chart IV.2.16). Banks' short-term FX external debt coverage ratio hovers above its historical average, indicating that they have strong FX liquidity buffers.

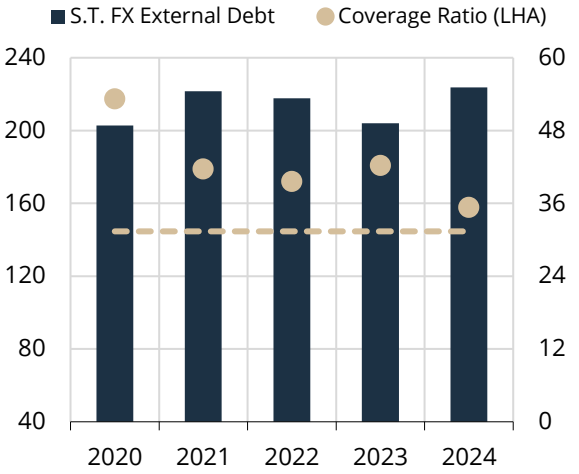
**Chart IV.2.15: FX Liquid Assets** (Billion USD)




Source: CBRT Last Observation: 03.24

Note: The average of the last three months has been reported for each year. The CBRT item covers total FX balances that banks hold at the CBRT and includes swap and free accounts balances.

**Chart IV.2.16: Short-Term FX External Debt and Coverage Ratio** (Billion USD, %)




Sources: KAP, Bloomberg Last Observation: 03.24

Note: External debt represents FX-denominated external debt that will fall due within one year and is calculated by excluding non-residents' FX deposit accounts. The most recent data pertaining to external debt is from March. Dashed lines show the average of coverage rates for the 2014-2021 period.

Banks' short-term FX external debt balance has increased slightly due to rising external borrowing. However, the fact that the capacity of FX liquid assets to cover short-term FX-denominated external debt is above the historical average suggests that external debt repayments do not constitute a risk factor for banks and that the sector is resilient to global liquidity developments. The FX-denominated required reserves amounting to USD 78 billion stand as an additional facility to support banks' liquid asset portfolios.

**Table IV.2.1: Developments in Selected Liquidity Indicators**

| | May 2013 | June 2018 | May 2023 | March 2024 |
|---|---|---|---|---|
| **FX External Debt** (Billion USD) | 127 | 164 | 101 | 119 |
| **Short-Term FX External Debt** (Billion USD) | 69 | 73 | 49 | 55 |
| **FX Liquid Assets** (Billion USD) | 75 | 125 | 88 | 87 |
| **Short-Term Debt Coverage Ratio** (%) | 108 | 170 | 177 | 158 |
| **Average Remaining Maturity of External Debt** (Month) | 32 | 37 | 36 | 33 |
| **FX Required Reserves** (Billion USD) | 28 | 42 | 77 | 78 |

Source: CBRT

Note: FX liquid assets are the sum of items listed in Chart IV.2.15.

## IV.3 Interest Rate and Exchange Rate Risk

**Following the gradual increase in the policy rate, the interest rate spreads between stock loans and deposits are converging to their historical averages.**

Amid the rate hikes that started in June 2023, loan and deposit rates also trended upwards. Hikes in interest rates may have an impact on bank balance sheets through the loan-deposit rate spread and revaluation due to the maturity mismatch in the sector. Since the beginning of the rate hike cycle, the interest rate on newly extended loans has surged by 48.4 percentage points, and the weighted average interest rate on stock loans has risen by 29.7 percentage points in the May 2023 – March 2024 period to 47.3%. On the other hand, regarding the deposits, whose interest rate is renewed faster than loans due to their shorter maturity, the interest rate on newly opened deposits increased by 31.4 percentage points in the same period, while the interest rate on stock TL deposits excluding demand deposits rose by 26.7 percentage points, close to the increase in flow interest rates (Charts IV.3.1 and IV.3.2). Having been tilted to the downside at the start of the rate hike cycle, the stock interest rate margin improved in light of these developments, and core margin, adjusted for demand deposits, has moved up into positive territory since July. However, interest rate spreads between stock loans and deposits have recently started to converge to their historical averages (Chart IV.3.3). On the other hand, the market value of long-term and fixed-income securities that banks have on their balance sheets under the regulations saw impairment due to the upward movement in Turkish lira GDDS interest rates by 16 to 35 percentage points for different maturities (Chart IV.3.4). That said, as banks classify these securities mostly using the amortized cost method, the impact of these impairments on balance sheets remained limited.

**Chart IV.3.1: TL Deposit Rate Curve*** (Stock, %)

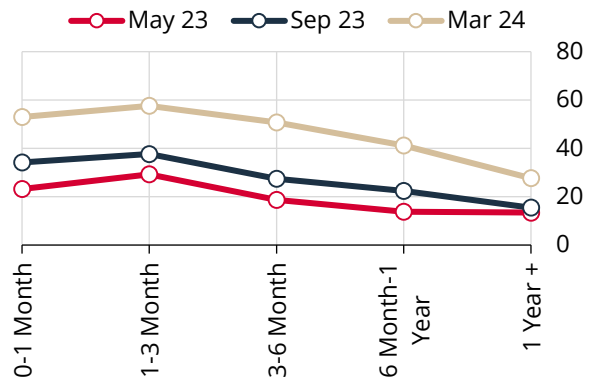
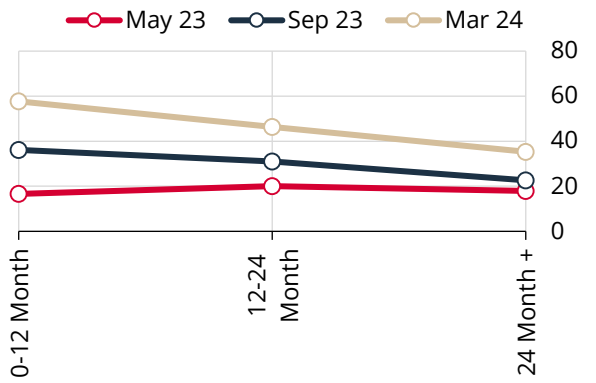


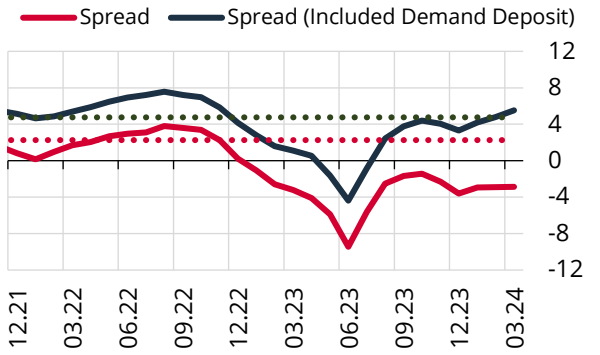

**Chart IV.3.2: TL Loan Yield Curve*** (Stock, %)




Source: CBRT Last Observation: 03.24

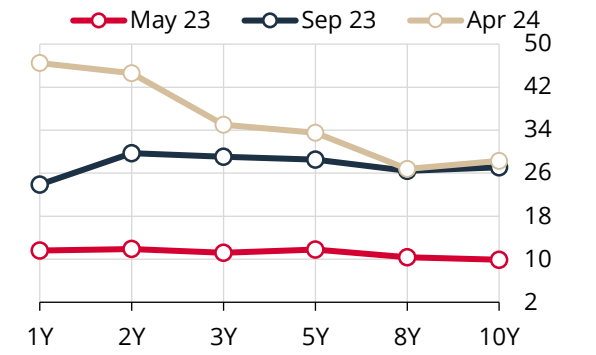
Note: * Demand deposits and banks' deposits are not included in deposit interest rates. Participation banks are not included.

**Chart IV.3.3: TL Loan*- Deposit Rate Spread** (Stock, %)




Source: CBRT Last Observation: 03.24

**Chart IV.3.4: Yield Curve of Fixed-Rate TL GDDS**** (Compound, %)




Source: Bloomberg Last Observation: 04.24

Note: * Participation banks are excluded. Loan rates, credit cards and overdraft accounts are included. Dashed lines denote the 2013-2021 average. ** Data of the respective month's last day.

**The maturity mismatch between interest rate-sensitive assets and liabilities remains close to the historical average.**

The weighted average maturity of banks' interest rate-sensitive TL assets remains almost steady at 14 months. The share of long-term fixed-income securities increased after the introduction of the securities maintenance practice, leading to an extension in the average maturity of TL assets, and the maturity has recently followed a flatter course. The average maturity of interest rate-sensitive TL liabilities stood at 4.8 months by March (Chart IV.3.5). The difference between the weighted average maturities of FX assets and liabilities has declined minimally since the last report period. The average maturity of FX assets was 17.8 months, while that of FX liabilities was 12.6 months (Chart IV.3.6). Meanwhile, the maturity spread between TL assets and TL liabilities was 9.6 months, close to the historical average, but the maturity spread between FX assets and FX liabilities declined to 5.2 months (Chart IV.3.7).

**Chart IV.3.5: Weighted Average Maturity of TL Assets and Liabilities** (Month)

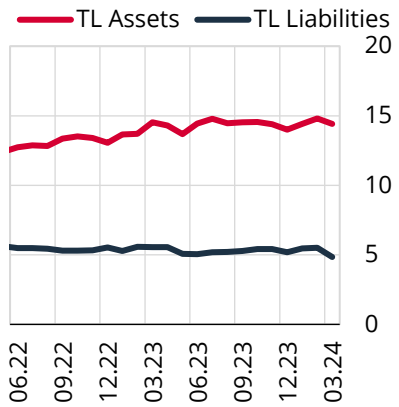



**Chart IV.3.6: Weighted Average Maturity of FX Assets and Liabilities** (Month)

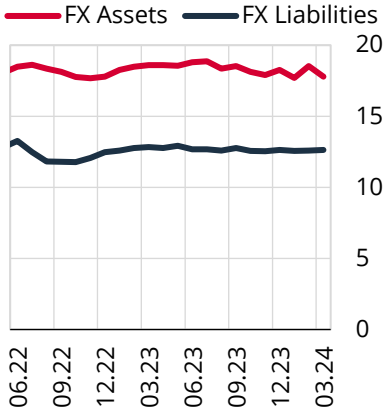
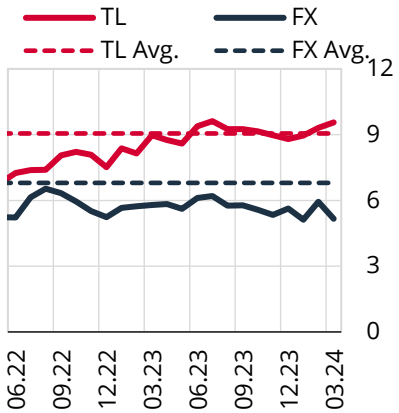



**Chart IV.3.7: Weighted Average Maturity Difference Between Assets and Liabilities** (Month)



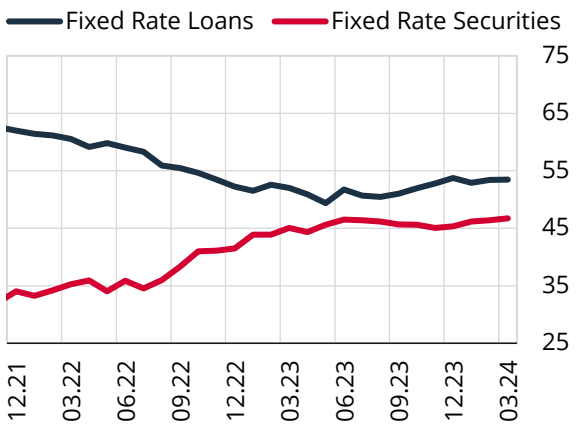

Source: CBRT Last Observation: 03.24

Note: Maturities show the repricing period. Weighted average maturities are calculated based on the mid-points of maturity brackets and the cash flows of related financial assets and liabilities. The 2013-2020 averages are shown. Participation banks are not included. Banks can allocate core deposits, calculated based on demand deposits, across maturities up to three years.

**The share of fixed-rate loans in banks' loan portfolios is increasing.**

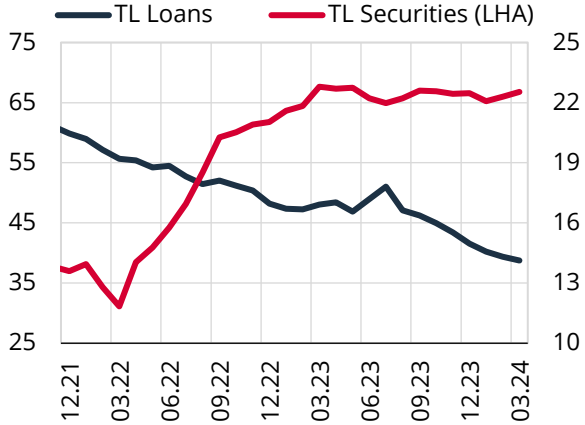
The share of long-term fixed-income securities in banks' portfolios increased from the second half of 2022 until the start of the interest rate hike cycle. In that period, to manage the repricing risk they were exposed to, banks reduced the share of fixed-rate loans but increased the same after the rate hike cycle kicked off. This is attributed to the increase in banks' appetite for fixed-rate loans following the rise in loan rates. Meanwhile, as a result of the gradual simplification of the regulations that encouraged banks to purchase long-term fixed-income securities, the share of fixed-rate securities on balance sheets has been almost flat (Chart IV.3.8). On the other hand, while the average maturity of TL securities did not display a significant change, that of fixed-rate TL loans decreased (Chart IV.3.9).

**Chart IV.3.8: Interest Structure of TL Securities and TL Loans** (%)




Source: CBRT

**Chart IV.3.9: Maturity of Fixed-Rate TL Securities and TL Loans** (Remaining Maturity, Month)



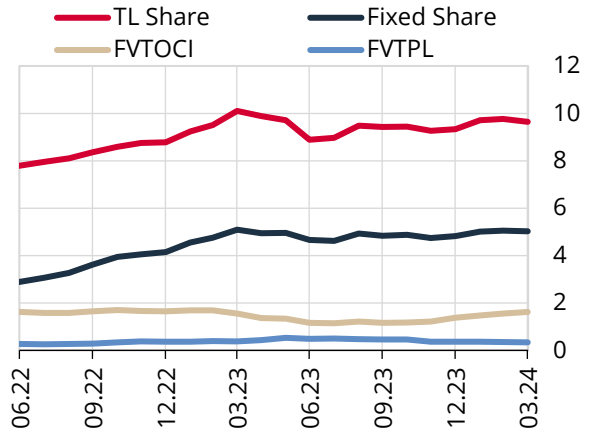

Last Observation: 03.24

Note: Weighted average maturities are shown. Weighted average maturities are calculated based on the mid-points of maturity brackets and cash flows of fixed-rate TL loans. The maturity for TL securities is calculated based on total fixed-income securities held by banks. Participation banks are excluded.

**Banks offset the losses that may arise from impairment of securities by classifying securities at amortized costs on their balance sheets.**

The share in assets of TL securities that banks have on their balance sheets is 9.6%, while the share of fixed-rate TL securities is 5% (Chart IV.3.10). Banks account for long-term and fixed-rate TL securities at amortized cost on their balance sheets to limit the adverse impact of impairment of securities on profitability and equity. The share of fixed-rate TL securities at amortized cost stood at 62% (Chart IV.3.11).

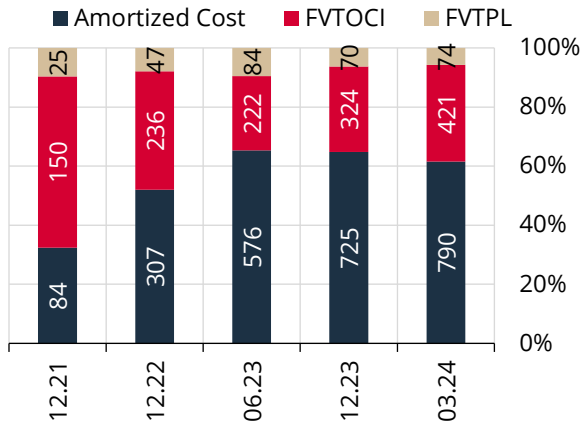
**Chart IV.3.10: Asset Share of TL Securities** (%)




Source: CBRT

Last Observation: 29.03.24

**Chart IV.3.11: Fixed-Rate TL Securities** (Billion TL, % Share)




Source: CBRT

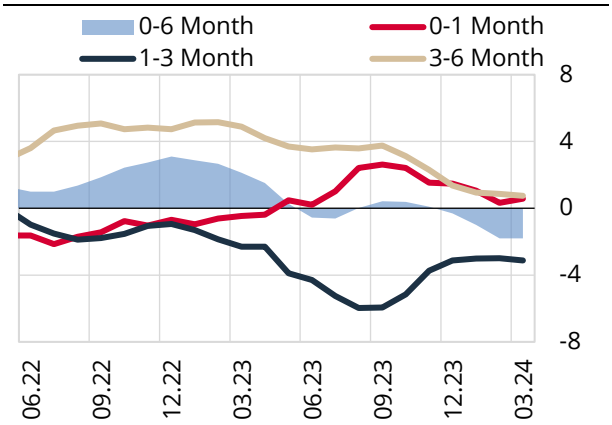
Last Observation: 29.03.24

Note: Securities that yield non-interest income are included in fixed-rate securities. FVTPL: Securities at fair value through profit or loss. Amortized Cost: Securities valued over amortized cost. FVTOCI: Securities at fair value through other comprehensive income.

**The spread between TL assets and liabilities that banks have at maturities shorter than six months has shifted into negative territory.**

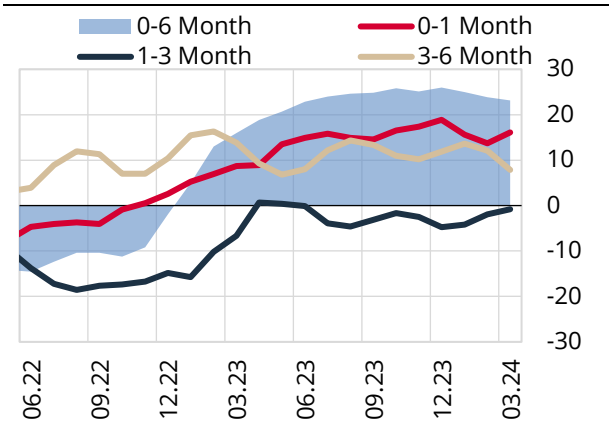
On the back of the reserve requirement practice imposed on KKM accounts to sterilize excess TL liquidity in the system, banks' TL positions with maturities of up to one month shifted to positive territory in the third quarter of 2023. Moreover, due to the differentiation of reserve requirement ratios across maturities, banks reduced their negative positions with maturities of 1-3 months by channeling their TL positions to 6-month and longer maturities. Since the third quarter of 2023, banks' positions with up to-one-month maturities have decreased slightly due to the decline in reserve requirements amid a faster shift from KKM deposits to TL deposits, (Chart IV.3.12). On the FX side, as FX deposits are predominantly kept in demand deposits, the positive position for maturities up to six months is maintained (Chart IV.3.13).

**Chart IV.3.12: TL Asset-Liability Gap Analysis**
(%, 3-Month MA)




Source: CBRT Last Observation: 03.24

**Chart IV.3.13: FX Asset-Liability Gap Analysis**
(Billion USD, 3-Month MA)




Source: CBRT Last Observation: 03.24

Note: Participation banks are excluded. Demand deposit items are excluded.

**The sensitivity of banking books to TL and FX interest rate shocks remains below historical averages.**

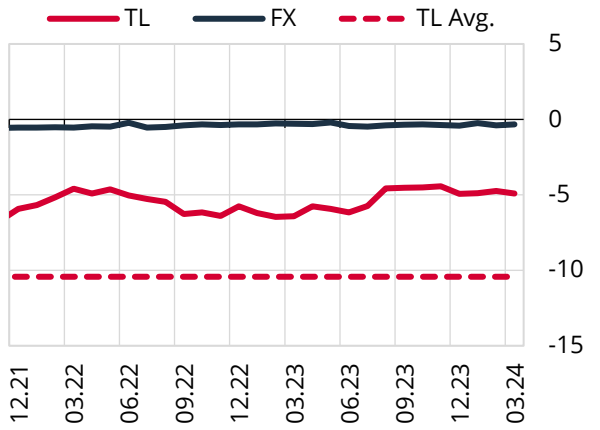
According to the standard interest rate risk measurement approach, in the event of an upward shock of 500 basis points in TL interest rates and 200 basis points in FX interest rates, the likely loss arising from banking books remains quite limited for FX, while it stands at 4.9% of the regulatory capital for TL, which is well below the historical average (Chart IV.3.14)[1]. Under the shock scenario, no bank incurs a loss of 15% or more of the regulatory capital, while the interest rate shock sensitivity of banks that have 10.2% of the sector's assets is in the range of 10-15% (Chart IV.3.15). Accordingly, the sector appears to have a risk outlook and balance sheet structure aligned with regulatory limits when an interest rate shock is applied.

**Although the sector's FX long position has declined slightly, the FXNGP/capital ratio has remained within legal limits.**

The FX net general position (FXNGP) declined after October 2023 to USD 2.5 billion on May 10, 2024, but the FXNGP/capital ratio remained at 3%, within the legal limit[2] (Chart IV.3.16). The number of banks with an FX long position decreased, while the asset size of banks with an FX position in positive territory accounts for a significant portion of the sector (Chart IV.3.17). Meanwhile, the on-balance sheet FX short position showed fluctuations after October 2023, and stood at USD 40 billion in May 2024, slightly below the October level (Chart IV.3.18).

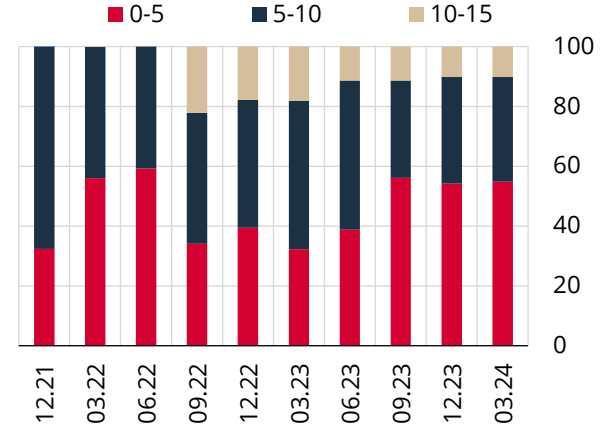
[1]Under the BRSA's Regulation on the Measurement and Assessment of the Interest Rate Risk in the Banking Book via the Standard Shock Method, the interest rate risk-driven loss to regulatory capital ratio cannot exceed 20%.
[2]The regulatory limit for the FXNGP/capital ratio, which was formerly 20%, was decreased to 5% with an amendment that took effect on January 9, 2023, but raised to 10% on March 9, 2023.

**Chart IV.3.14: Loss-to-Capital Ratio After Positive Interest Rate Shock** (Banking Calculations, %)




Source: CBRT Last Observation: 03.24

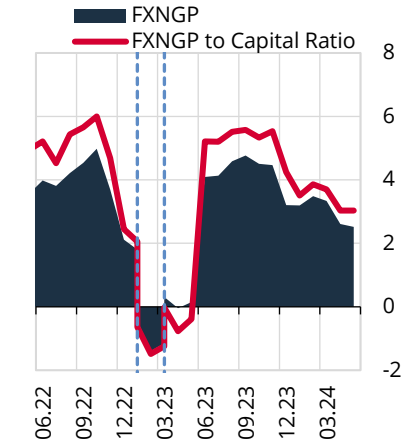
**Chart IV.3.15: TL Asset Shares of Banks by Loss-to-Capital Ratio Intervals After TL Interest Rate Shock** (%)




Source: CBRT Last Observation: 03.24

Note: The economic value approach takes account of the change in the present value of interest rate-sensitive assets and liabilities in the face of a change in the interest rate. The yield curve is assumed to display a parallel upward movement of 500 bps in a TL interest rate shock and 200 basis points in an FX interest rate shock. Losses under the interest rate shock scenario are divided into brackets. The total assets of banks in each bracket are proportioned to the total assets of the sector. Participation banks are excluded. Historical average is the average of 2013-2020 period.

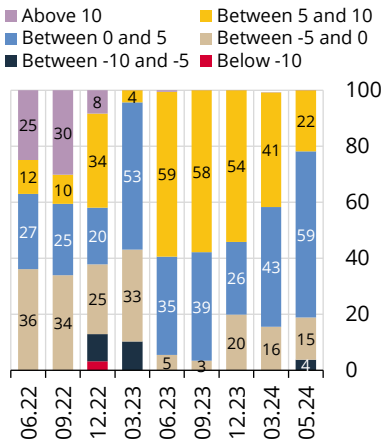
**Chart IV.3.16: FXNGP-to-Capital Ratio and FXNGP** (%,Billion USD)




Source: CBRT

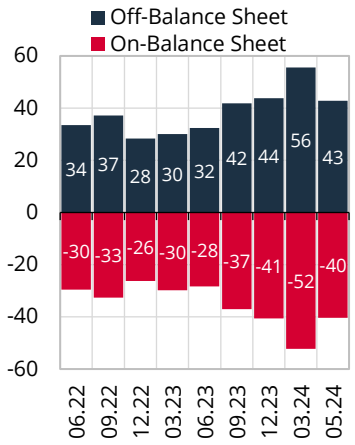
Note: Weekly simple arithmetic mean of FXNGP/Capital ratio has been calculated. Dashed lines denote the dates of the regulatory amendments enacted by the BRSA.

**Chart IV.3.17: Total Asset Shares of Banks by FXNGP/Capital Ratio** (%)




Note: Asset aggregates of March were used in April and May calculations.

**Chart IV.3.18: Banking Sector's FX Position** (Billion USD)



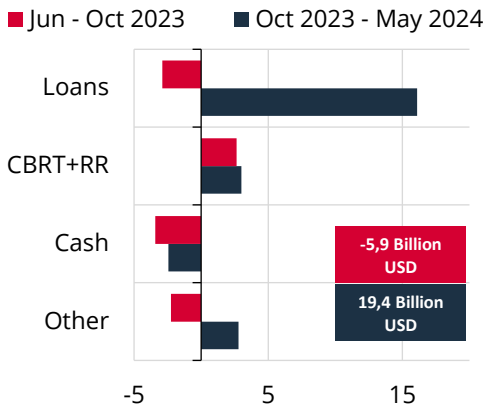

Last Observation: 10.05.2024

**The decline in the on-balance sheet short position was driven by the growth of FX assets outpacing the growth of FX liabilities.**

On-balance sheet FX assets increased by USD 19.4 billion between October 2023 and May 2024 (Chart IV.3.19). Banks' FX assets were supported by the FX loans channel as the recent rise in the cost of borrowing in Turkish lira and expectations regarding the exchange rate made FX loans more attractive. Additionally, the rise in CBRT and RR items was another driver of the increase in FX assets. Following the fall in the risk premium and the improvement in external borrowing conditions amid the tight monetary policy, banks' external Eurobond issuances, syndicated loan renewals and subordinated debts have been on the rise. Accordingly, banks' on-

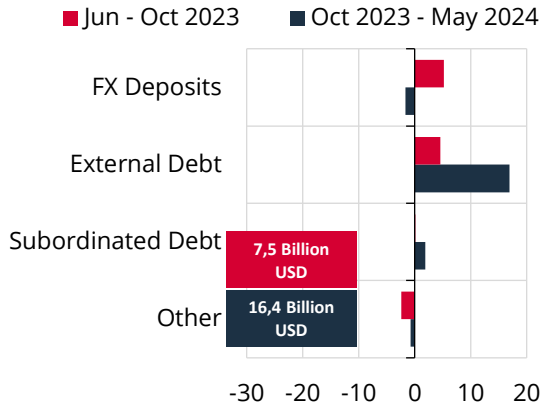
balance sheet FX liabilities were up by USD 16.4 billion in the October 2023-May 2024 period. The most important factor in the increase in liabilities was the rise in the external debts item (Chart IV.3.20).

**Chart IV.3.19: Change in Banking Sector's On-Balance Sheet FX Assets** (Billion USD)




Source: CBRT Last Observation: 10.05.2024
Note: Cash also includes receivables from foreign banks and reverse repo transactions.

**Chart IV.3.20: Change in Banking Sector's On-Balance Sheet FX Liabilities** (Billion USD)

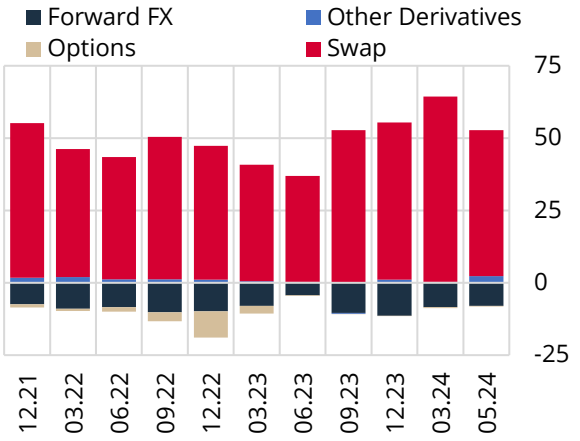



Source: CBRT Last Observation: 10.05.2024
Note: FX deposits refer to the total of FX and precious metal deposit accounts. External debt includes loans from abroad, securities issued and funds from repo transactions.

**Off-balance sheet transactions mostly feature currency swaps.**

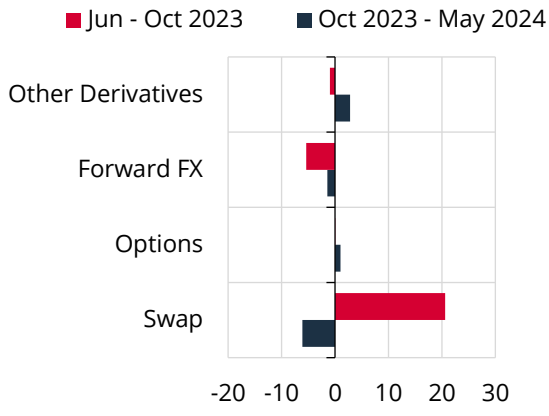
While banks mostly use currency swaps to close their on-balance sheet short positions, the volume of forward FX transactions among other derivative instruments is high but limited (Chart IV.3.21). Banks manage their balance sheets by converting their increasing foreign currency liquidity stemming from the rise in their on-balance sheet FX liabilities into TL through swap transactions. However, it is noteworthy that they reduced their swap receivables after October 2023. Regarding forward FX transactions, banks took action on the net buy side (Chart IV.3.22).

**Chart IV.3.21: Banks' Off-Balance Sheet Net FX Assets** (Billion USD)




Source: CBRT Last Observation: 10.05.2024
Note: Currency options refer to the delta equivalent of currency options for this period. Forward FX position also includes FX position with a value date up to two days.

**Chart IV.3.22: Change in Banks' Off-Balance Sheet Net FX Position** (Billion USD)



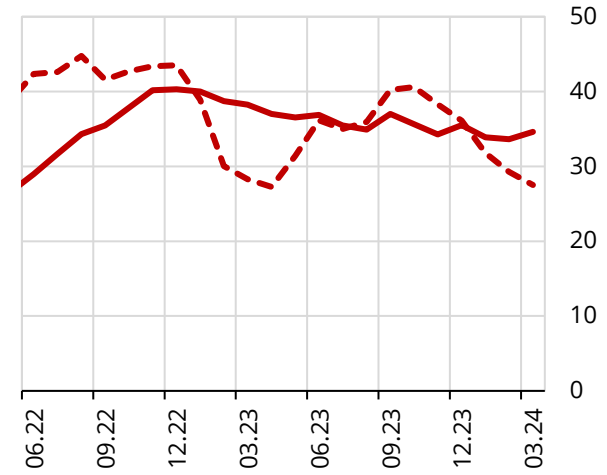

Source: CBRT Last Observation: 10.05.2024
Note: Currency options refer to the delta equivalent of currency options for this period. Forward FX position also includes FX position with a value date up to two days.

## IV.4 Profitability and Capital Adequacy

**The profitability of the banking sector picked up in the third quarter of 2023 and continues to support internal capital generation, albeit with a decline since the last quarter.**

The sector's return on equity stood at 34.6% as of March 2024. The annualized return on equity for the last three months, which reflects recent trends, has been on a noticeable downtrend (Chart IV.4.1). The effects of policy rate increases on loan and deposit repricing and the cost of reserve requirements until February 2024 had a determinant impact on profit performance. As of the second quarter, the effects of interest rate hikes on repricing are expected to fade and the target-based remuneration rates applied to RRs will have a positive impact on sector profitability. Since the second half of 2023, there has been no significant change in the distribution of profitability among banks. Based on their asset aggregates, a significant portion of banks have a return on equity between 25-50% (Chart IV.4.2). Moreover, the sector's return on equity hits 38% when banks' free provisions of TL 66.4 billion as of March 2024 are considered.

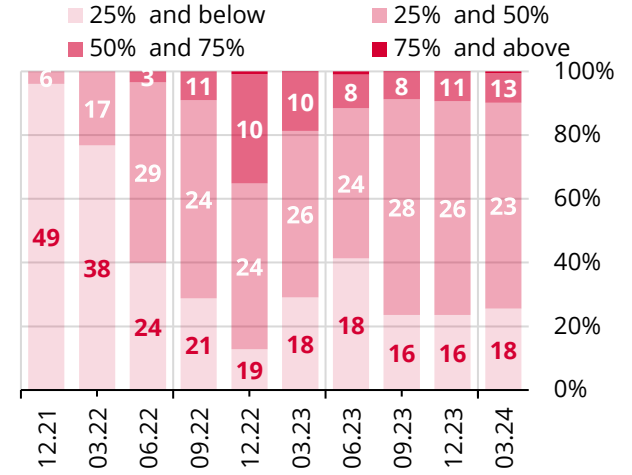
**Chart IV.4.1: Return on Equity** (3-Month, 12-Month, %)




Source: CBRT Last Observation: 03.24

Note: Dashed line shows the annualized three-month return on equity ratio.

**Chart IV.4.2: Distribution of Return on Equity** (12-Month, % Share in Assets)

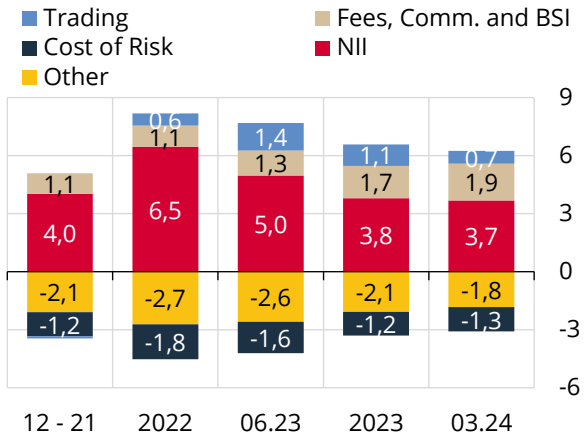



Source: CBRT Last Observation: 03.24

**An analysis of the components of profitability reveals that the decline in net interest income has begun to slow down, fee and commission income has gained strength, and the cost of credit risk has hovered close to its historical average.**

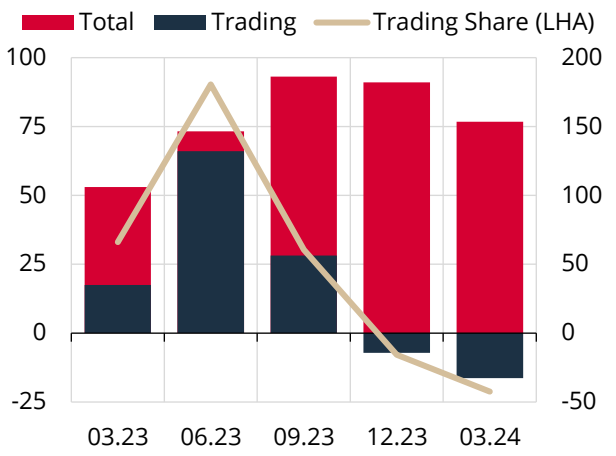
In the second half of 2023, the sector's net interest income declined significantly due to the impact of policy rate increases on loan and deposit pricing. As of the first quarter of 2024, this impact began to fade. On the other hand, the contribution of fee, commission, and service income to profitability continued to grow, while the contribution of income from capital market and foreign exchange transactions to profitability declined (Chart IV.4.3). In the first half of 2023, the profits from capital market and foreign exchange transactions, which increased as a result of exchange rate developments and widening of foreign exchange buying-selling spread, declined as of the second half of 2023. As a result of this development, the contribution of trading profit to net period profit turned negative in the last quarter of 2023 (Chart IV.4.4).

**Chart IV.4.3: Components of Return on Assets**
(12-Month, Annualized, % Points)




Source: CBRT Last Observation: 03.24

**Chart IV.4.4: Components of Net Period Profit**
(3-Month, Billion TL, %)



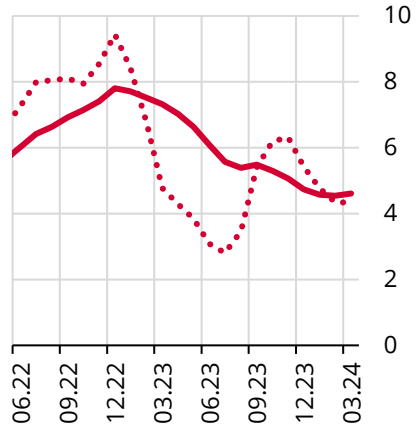

Source: CBRT Last Observation: 03.24

Note: Profits from capital market and foreign exchange transactions are defined as trading profit. Cost of credit risk is the sum of general and specific loan provisions.

**After an improvement in the third quarter of 2023, the net interest margin declined in the last two quarters due to the loan-deposit spread.**

The net interest margin ended 2023 at 4.7% level and edged down in the first quarter of 2024 to 4.6% in March (Chart IV.4.5). The lower net interest margin relative to 2022 was mainly caused by the decline in the loan-deposit spread. As of the second half of 2023, the impact of the loan-deposit spread has converged to zero (Chart IV.4.6). The interest margin curbs the annual increase in net interest income as of the third quarter of 2023, while volume growth supports interest income (Chart IV.4.7).

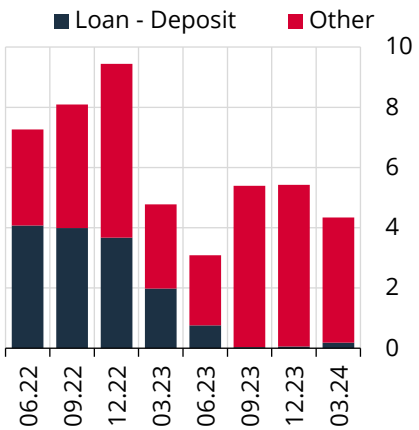
**Chart IV.4.5: Net Interest Margin**
(Annualized, %)




Source: CBRT Last Observation: 03.24

Note: Change in annualized three-month net interest margin is shown in light-colored line.

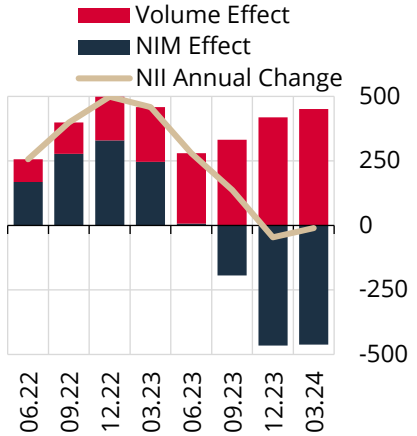
**Chart IV.4.6: Components of Net Interest Margin** (3-Month, Annualized, %)




Source: CBRT Last Observation: 03.24

Note: Other interest margin is the sum of securities, other income and expenses items.

**Chart IV.4.7: Annual Change in Net Interest Income and Contributions**
(Annualized, Billion TL)

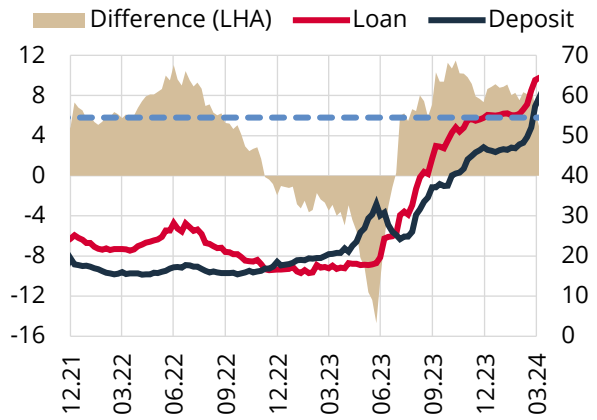



Source: CBRT Last Observation: 03.24

Note: The hypothetical effect that an annual change in the 12-month interest margin will bear through the interest-earning asset balance in the relevant period is defined as the interest margin effect, and the remainder of the change in the net interest income of the same period is defined as the volume effect.

Loan rates reflect the impact of increases in the policy rate since the second half of 2023 as well as the macroprudential policies, particularly the implementation of securities maintenance and reserve requirements based on loan growth. The flow data show that the spread between TL loan and time deposit rates moved into positive territory in the third quarter of 2023 and reached its highest level by the end of the year, before stabilizing at 4% as of the last week of April. Notably, the flow interest rate developments affect the stock TL loan-time deposit spread with a lag due to the duration gap. Accordingly, the stock TL loan-time deposit spread maintained its uptrend in the first quarter of 2024, and reached 6.1%. Finally, both flow and stock data indicate that the interest rate spread is above the historical average for the period 2012-2021 (Charts IV.4.8 and IV.4.9).

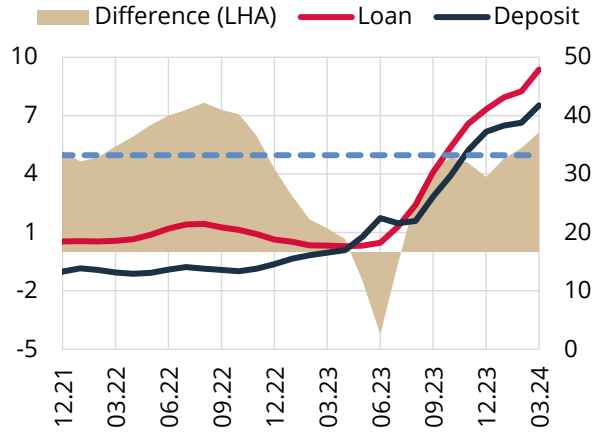
**Chart IV.4.8: TL Loan – Time Deposit Spread**
(Flow, %)




Source: CBRT Last Observation: 26.04.24

Note: Dashed lines show the historical average of 2012-2021.

**Chart IV.4.9: TL Loan – Time Deposit Spread**
(Stock, %)




Source: CBRT Last Observation: 03.24

**Banks' credit risk costs showed no significant increase during monetary tightening, while net fee, commission, and service revenues supported sector profitability.**

The credit risk cost of banks increased slightly as of the third quarter of 2023, and stood slightly above its historical average as of the first quarter of 2024 (Chart IV.4.10). The ratio of net fee, commission, and banking service revenues to assets continued to rise in the first quarter of 2024. Credit cards, which grew more strongly than other loans in the second half of 2023 and the first quarter of 2024, made the most significant contribution to this increase (Charts IV.4.11 and IV.4.12).

**Chart IV.4.10: Cost of Credit Risk** (3-month, Annualized, %)

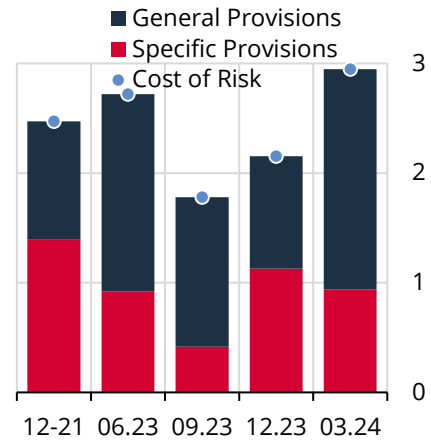



**Chart IV.4.11: Ratio of Net Fee, Commission, and Service Income to Assets** (3-month, Annualized, TL Billion, %)

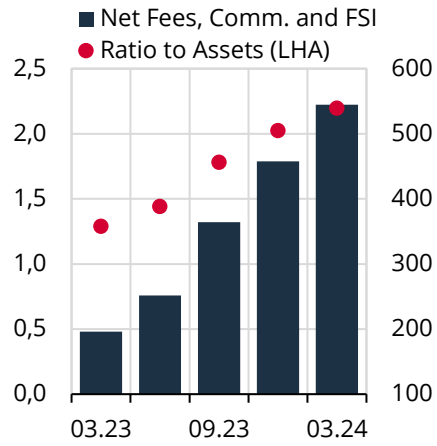
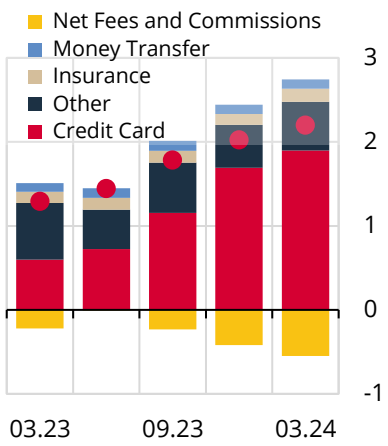



**Chart IV.4.12: Distribution of Ratio of Net Fee, Commission, and Service Income to Assets** (3-month, Annualized, %)




Source: CBRT

Last Observation: 03.24

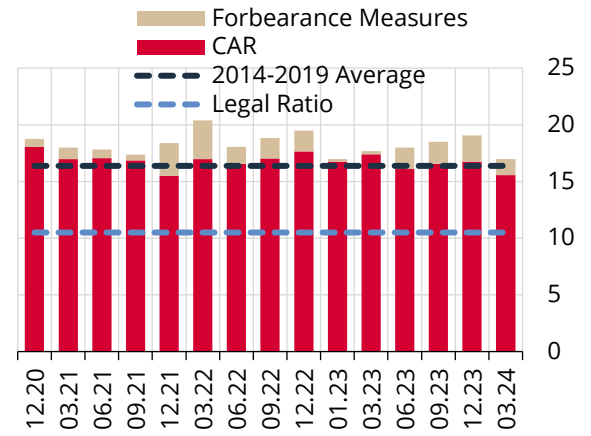
Note: The cost of risk is calculated by dividing the annualized three-month sum of specific and general provisions by the average gross loan amount for the respective period.

**Capital ratios maintain their course above regulatory thresholds. The capital position of the banking sector is capable of covering potential losses.**

As of March 2024, the banking sector's capital adequacy ratio (CAR) is 17%, and core CAR is 13.3%. In this reporting period, the BRSA's forbearance measures regarding capital adequacy calculations have been amended. The first amendment is to use the June 2023 exchange rate instead of the end-2022 rate for FX items in calculating the amount subject to credit risk as of the start of the year pursuant to the Regulation on Measurement and Assessment of Capital Adequacy Ratios of Banks. The other is the option to exclude from equity the negative net revaluation difference of securities under the portfolio of securities at fair value through other comprehensive income as of 1 January 2024. The first amendment had a downward effect on CAR, while the second had an upward effect. However, the exchange rate regulation had a higher downward effect. Subsequent to these amendments, the effect of the BRSA's forbearance measures on headline capital ratios decreased. Excluding these forbearance measures, the sector's CAR was 15.6% and core CAR was 12.1%. Despite a slight decline observed in capital adequacy ratios, the capital adequacy ratios of all banks are above the regulatory thresholds and close to their long-term average (Charts IV.4.13 and IV.4.14). [1]

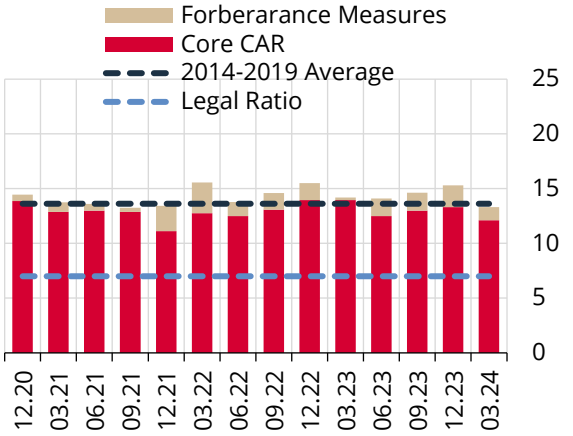
[1] Legal ratios are the sum of bank-specific countercyclical capital buffer, capital conservation buffer, and systemically important bank buffer ratio in addition to the minimum ratio of 8% as per Basel III regulations. In Türkiye, the countercyclical capital buffer ratio is 0%, the capital conservation buffer is 2.5%, and the systemically important bank buffer is 1-2%. Thus, the minimum consolidated ratios that banks in the sector are required to meet for CAR vary between 10.5% and 12.5% depending on the systemic importance of the bank. On the other hand, these ratios may be slightly higher than the bank-specific countercyclical capital buffer calculated according to banks' -exposures in other jurisdictions.

**Chart IV.4.13: Capital Adequacy Ratio** (%)




Sources: BRSA, CBRT's calculations Last Observation: 03.24

**Chart IV.4.14: Core Capital Adequacy Ratio** (%)




Sources: BRSA, CBRT's calculations Last Observation: 03.24

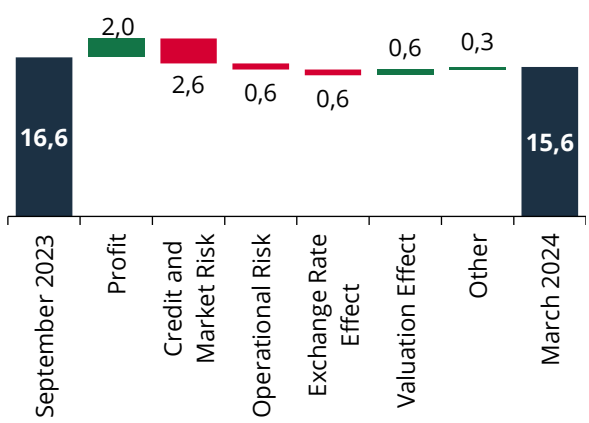
Note: Red bars indicate CAR and core CAR excluding BRSA forbearance measures.

**Banks' internal capital generation supports capital, but the sharp increase in risk-weighted assets led to a decline in capital ratios.**

Since the previous reporting period, the regulatory capital of banks has increased and profitability continues to be the most important factor that feeds capital adequacy. The new subordinated debts in 2024 also had a positive impact on capital ratios (Box IV.4.I). However, the growth in loans, the annual revision in the -value at operational risk, and the rise in exchange rates led to a faster increase in risk-weighted assets. Thus, CAR excluding BRSA forbearance measures declined slightly (Chart IV.4.15).

The regulatory capital of the banking sector is predominantly composed of core capital. Accordingly, approximately 78% of regulatory capital is composed of core capital, while profit and legal reserves stand out with a share of 56% in regulatory capital composition. On the other hand, FX-denominated subordinated debts provide banks with a diversity of instruments as well as protection from exchange rate increases due to their valuation effect. With improved financing conditions abroad and increased interest from foreign investors, banks issued additional Tier 1 and Tier 2 subordinated debt instruments in 2024. Thus, the share of subordinated debt in equity exceeded 16%. It is crucial to preserve the current structure of regulatory capital, which is mostly composed of core capital items with high capacity to absorb losses (Chart IV.4.16).

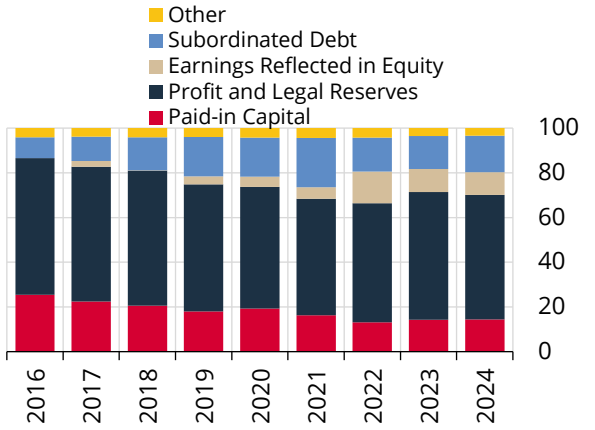
**Chart IV.4.15: Change in CAR** (%, Excluding BRSA Forbearance Measures)




Sources: BRSA, CBRT

Note: "Other" primarily reflects the impact of subordinated borrowings.

**Chart IV.4.16: Composition of Regulatory Capital** (%)



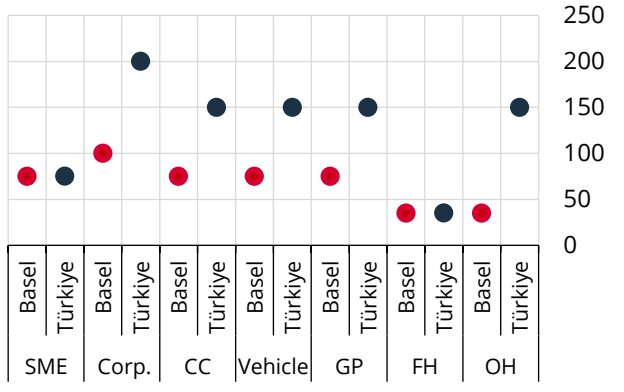

Sources: BRSA, CBRT Last Observation: 03.24

Note: Share premiums are included in paid-in capital. "Other" covers other equity items, with general provisions having a larger weight.

**Risk weights, one of the actively used macroprudential policy tools, are applied more prudently in Türkiye compared to international standards.**

Risk weights used in the calculation of amounts subject to the credit risk vary between 0% and 200% depending on the credit type. For retail loan types, the risk weights were applied under the Basel standard at 35% for housing loans and 75% for other retail receivables. However, in Türkiye, the risk weight for retail loans other than housing loans was set at 150%. Moreover, the Basel standard recommends applying a 100% risk weight to unrated -corporate exposures, while Türkiye applies a 200% risk weight to certain types of commercial cash loans extended as of 1 May 2022 (Chart IV.4.17). Due to higher risk weights applied to retail and commercial loans in recent years, the amounts subject to the credit risk at risk weights of 150% and 200% have increased (Chart IV.4.16). On the other hand, as the rise in risk weights is applied to new loans, their impact on capital adequacy appears gradually and over time.

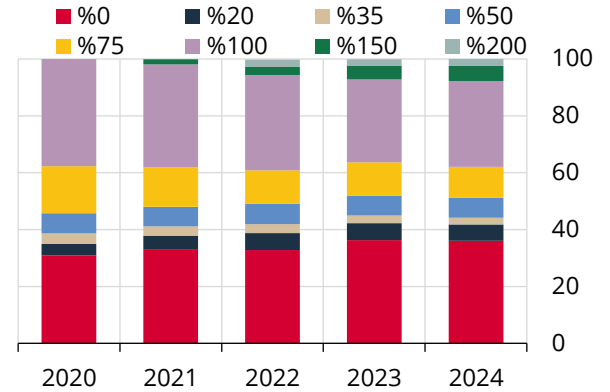
**Chart IV.4.17: Credit Risk Weights** (%)




Source: BRSA

Note: Corp., CC, GP, FH and OH represents corporates, credit cards, general purpose, first housing and other housing expect for first housing, respectively. The Basel standard recommends applying a risk weight of 100% to unrated -corporate exposures and a risk weight of 20% to 150% to rated -corporate exposures.

**Chart IV.4.18: Distribution of Items with Amounts Subject to Credit Risk by Risk Weights** (%, Standard Approach)

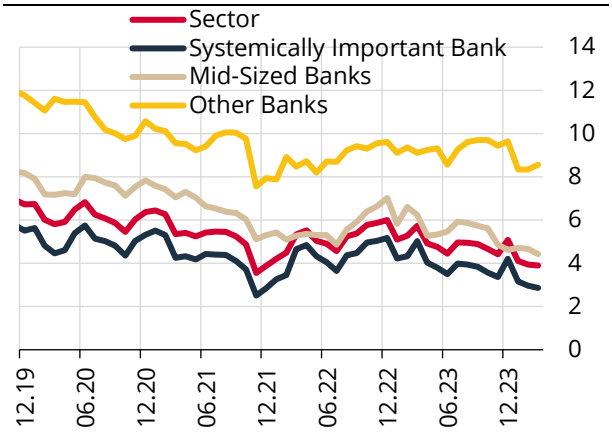



Sources: CBRT, BRSA Last Observation: 03.24

**Banks, systemically important banks in particular, generally seem to hold more capital than their capital requirements.**

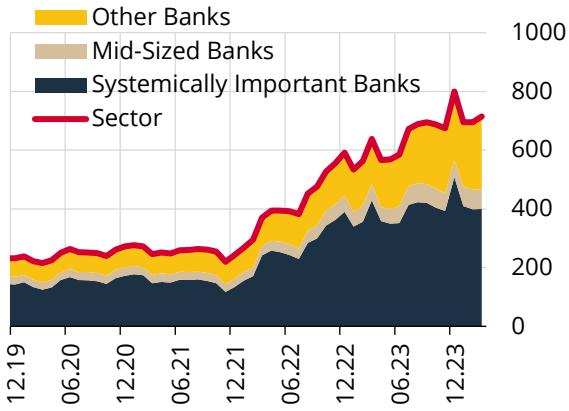
Excess capital increases banks' capacity to absorb unexpected risks and shocks in the short and medium term. It also helps banks finance the real economy and reduces concerns about banks' solvency during periods of economic slowdown and contraction. On the other hand, the fact that banks operate for extended periods with low asset quality risk against interest rate and exchange rate risks may affect their risk appetite and their decision to hold excess capital. Despite the nominal increase in banks' excess capital, the ratio of excess capital to risk-weighted assets has declined (Charts IV.4.19 and IV.4.20). However, in addition to banks' appetite for lending, exchange rate developments and the implementation of risk weights higher than international standards were also influential in this development. Moreover, more prudent provisioning (including free provisions) compared to previous years is a factor that has a downward impact on banks' excess capital buffers. However, the decline in excess capital through this channel does not mean a decrease in banks' loss absorbency capacity. The free provisions that banks set aside on a discretionary basis ensure that banks are prepared for any potential risks (Chart IV.4.21). Banks' tendency towards issuing subordinated debts in 2024 strengthens their capital buffers and provides additional room for growth.

**Chart IV.4.19: Banks' Excess Capital Buffer** (%)




Sources: BRSA, CBRT Last Observation: 03.24

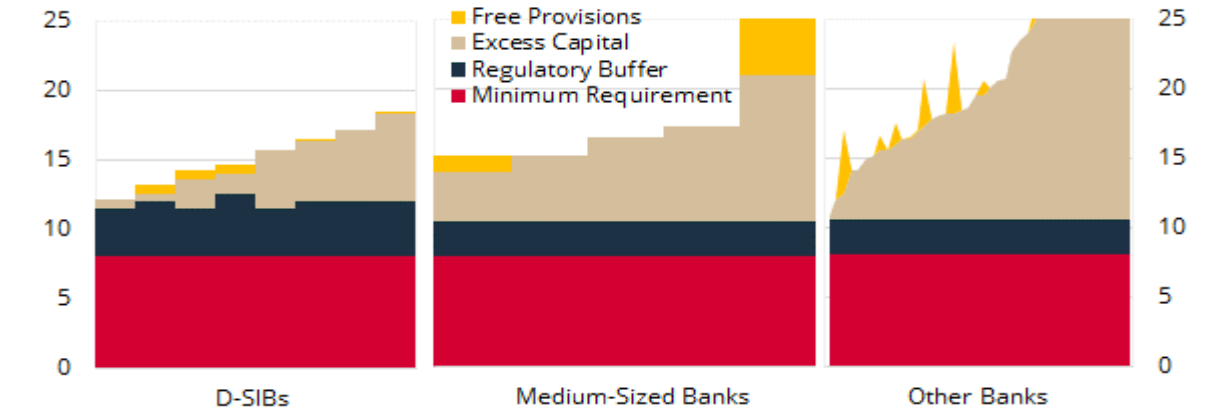
**Chart IV.4.20: Banks' Nominal Excess Capital Buffer (**Billion TL)




Sources: BRSA, CBRT Last Observation: 03.24

Note: CARs excluding BRSA forbearance measures are used. The calculation of excess capital buffers includes the systemically important bank buffer, capital conservation buffer, and bank-specific countercyclical capital buffer in addition to the 8% regulatory limit.

**Chart IV.4.21: Banks' Regulatory Capital Ratios and Excess Capital Buffers** (%)




Sources: BRSA, CBRT Last Observation: 03.24

Note: CARs excluding BRSA's forbearance measures are used. Banks with a CAR above 30% are not shown in the chart on the right.

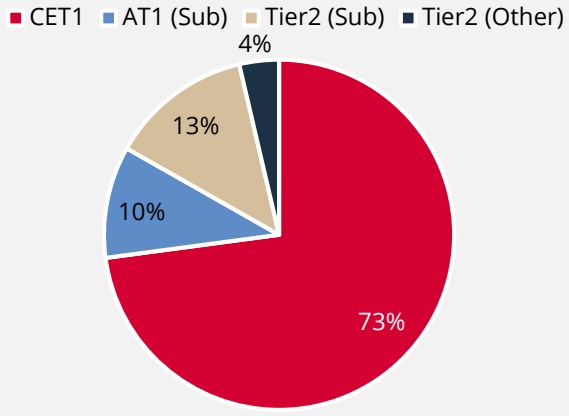
# Box IV.1.I: Subordinated Debt Issues

The notable decline in the sovereign risk premium has had a positive impact on banks' access to foreign debt. The buoyant course in banks' external bond issues, which started in the second half of 2023, continued in the first five months of 2024. In addition to Eurobond issues, banks' subordinated bond transactions also registered an uptick. This box provides information on the purpose, types and advantages of subordinated bonds as well as the recent developments.

Subordinated bond transactions have become more widely used in Türkiye with the Basel III regulations and the deepening of the issuance market. The Regulation on Equity of Banks released by the BRSA in 2014 includes the definitions of regulatory capital and the components thereof in compliance with Basel III. Accordingly, there are requisites for the debt instrument issued to be considered 'subordinated'. In this context, the main criterion is that in the event of liquidation of the bank, the debt instrument holder will be entitled to claim receivables after the depositors and other senior creditors, and the repayment option can be exercised by the issuing bank after five years at the earliest. These features are necessary but not sufficient for a debt instrument to be subordinated. In the event that the operating license of the bank is revoked or the bank is transferred to the Fund, if the debt can be written off from the balance sheet or the bond debt can be converted into shares to offset the loss in question then this debt instrument is subordinated to capital.

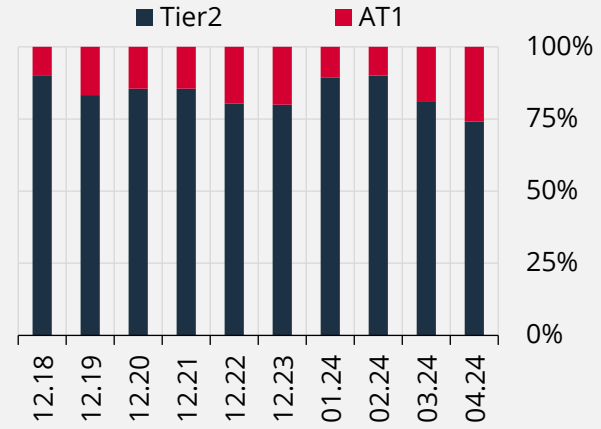
Regarding capital adequacy regulatory capital consist of Common Equity Tier I capital (CET1), Additional Tier I (AT1) capital and Tier II capital. Accordingly, while Common Equity Tier I capital consists of the highest quality items with the highest loss-absorbing capacity such as paid-in capital and retained earnings, Additional Tier I capital and Tier II capital mainly consist of subordinated debts and general provisions. As of April 2024, approximately 73% of banks' regulatory capital consists of common equity Tier I capital, while the remaining portion is mainly composed of subordinated debt instruments (Chart IV.1.I.1).

**Chart IV.1.I.1: Components of Regulatory Capital**
(%)




Sources: CBRT, BRSA Last Observation: 04.24

**Chart IV.1.I.2: Distribution of Subordinated Debts**
(%)



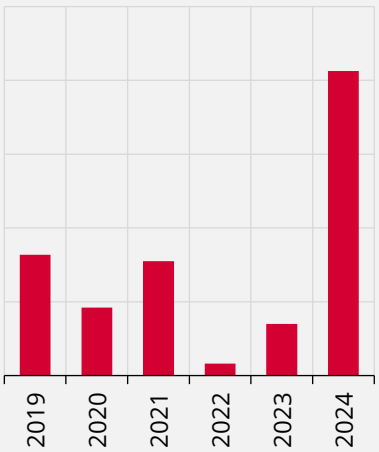

Sources: CBRT, BRSA Last Observation: 04.24

One of the main differences in terms of eligibility for inclusion in additional Tier I or Tier II capital is related to the maturity structure of the debt instrument. The first one is the possibility to include debt instruments in AT1 subordinated bond items are issued as perpetual, while debt instruments that can be included in Tier II capital are issued with a maturity of at least five years. The second one is the ability of the debt instrument to be devalued or converted into equity shares in case the Common Equity Tier 1 ratio falls below 5.125%. Accordingly, subordinated bonds, which can be included in additional Tier 1 capital, is a debt instrument that is closer to common equity tier 1 (paid-in) capital, while bond instruments included in Tier 2 capital have much more noticeable bond characteristics. Subordinated bonds included in Tier II capital contributes to the hedging of regulatory capital against exchange rate fluctuations and offsets the negative impact of exchange rate increases on capital ratios to some extent. Accordingly, the weight of bonds that can be included in Tier II capital is high in the subordinated debt structure of banks (Chart IV.1.I.2).

The main driver for banks to issue subordinated bonds in this period is strengthening their capital base. Although the regulatory capital adequacy ratio (CAR) in Türkiye is 8%, the BRSA has set a more conservative target of 12%. In view of the capital conservation buffer and the systemically important bank buffer in Basel III, regulatory capital ratios on a bank basis are set between 10.5% and 12.5%. Therefore, even if the CAR is already above the minimum ratios, banks may prefer to strengthen their capital buffers to build a stronger shield with a forward-looking perspective.

In the first five months of 2024, Turkish banks issued USD 4.1 billion worth of subordinated debt, well above the past five years (Chart IV.1.I.3). These issues contributed around 50-230 bp to banks' CARs after taking into account the subordinated debt that matured or were repaid utilizing the early redemption option. The average cost of these transactions was 9.4%, which is approximately 1 percentage point below the average cost of transactions in 2023 (Chart IV.1.I.4). In the 2019-2021 period, the renewal of issues with early redemption dates and banks' further use of these instruments limited the decline in the subordinated debt balance. In the 2022-2023 period, when the sovereign risk premium hovered at high levels, the subordinated debt balance declined as a result of banks' utilization of the early redemption option and limited new issues. In this period, the high transaction cost as well as the falling FX loan demand hindered the renewal of subordinated bonds or utilization of the early redemption option. In 2024, following the upturn in banks' subordinated debt issues, the subordinated debt balance increased to USD 10.7 billion (Chart IV.1.I.5).

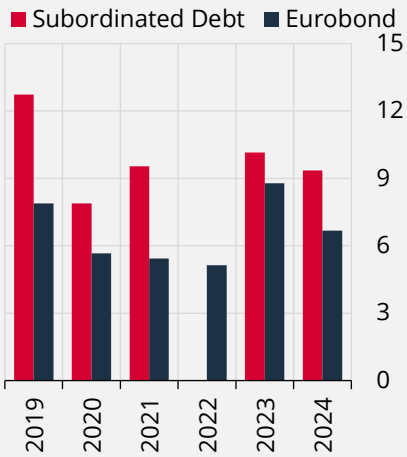
**Chart IV.1.I.3: Subordinated Debt Issues** (Flow, USD Billion)




Source: CBRT Last Observation: 08.05.24

Note: USD equivalents of euro and TRY-denominated borrowings are employed.

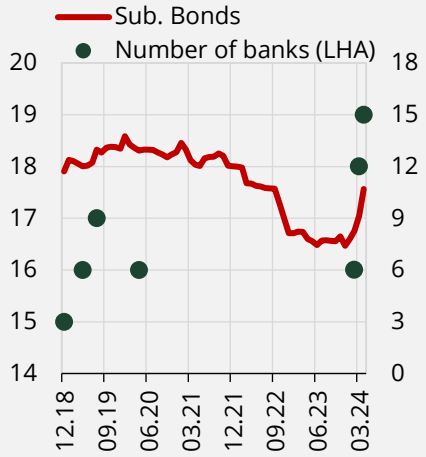
**Chart IV.1.I.4: Cost of Issues** (USD, Average, %)




Source: CBRT Last Observation: 04.24

Note: USD equivalents of euro and TRY-denominated borrowings are employed.

**Chart IV.1.I.5: Subordinated Debt Balance and Number of Banks** (Stock, USD Billion, Number)




Source: CBRT Last Observation: 04.24

Despite the tightening in global financial conditions, the notable decline in the sovereign risk premium in the second half of 2023 and the end of the interest rate hikes in advanced economies invigorated the investors' appetite for long-term lending. With the improvement in access to foreign financial markets, Turkish banks' bond issuances have revived, either as a replacement for the transactions that have been or will be redeemed or as fresh resources. This stimulus is considered important in terms of confirming the credibility and borrowing capacities of banks.

In sum, subordinated issues are instruments that strengthen the capital structure and underpin the funding structure of banks without changing their shareholder base. The recent issuances and similar transactions that may be carried out in the upcoming period contribute to extending the maturity of liabilities, increasing the diversity of financial instruments and deepening financial markets while strengthening the capital structure of the banking sector.